

# Manufacturers Record

Reg. U. S. Patent Office



OCTOBER, 1936

BALTIMORE, MD.

## AMERICA'S WEALTH

Natural resources are the foundation on which a country's progress is built.

We give the figures of production per year and the reserves of four basic assets of America.

We produce 420 million tons of coal and have reserves for 2850 years.

We produce 30 million tons of iron ore and have reserves for 330 years.

We produce 994 million barrels of petroleum and have developed reserves for 12 years, besides one billion acres of probable oil bearing land which, through science in refining, adds immeasurably to reserves.

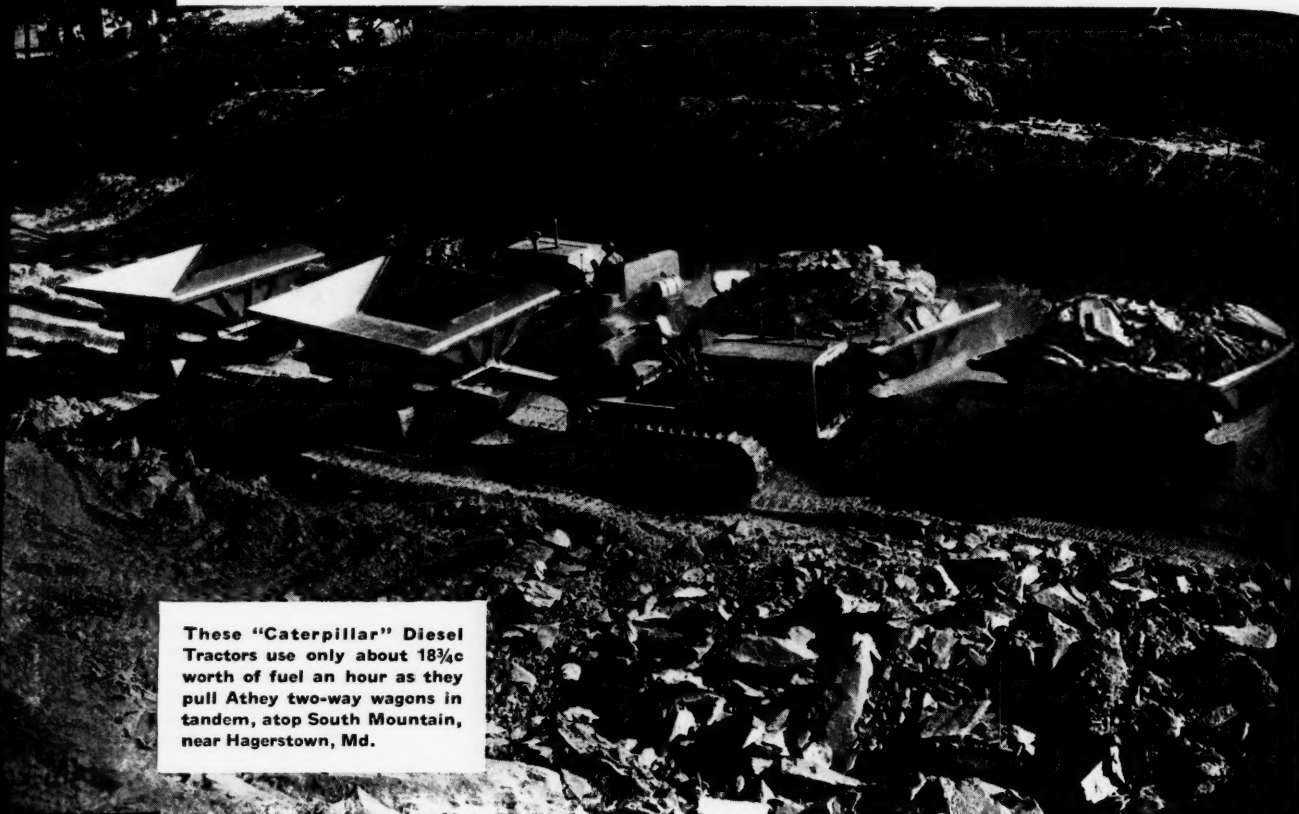
We produce 22 billion feet of lumber and have enough timber for 76 years, besides the annual growth on 494 million acres of forest lands.

While our growth has been tremendous, we have barely touched the surface of our wealth creating capacity in these and other basic resources.

No nation is so richly endowed as the United States. We are producing and consuming the greatest percentage of the world's manufactured output, and yet future enterprise, properly encouraged, should make the present record seem almost trivial.

# FIRST

- IN EVERYTHING



These "Caterpillar" Diesel Tractors use only about 18 $\frac{3}{4}$ c worth of fuel an hour as they pull Athey two-way wagons in tandem, atop South Mountain, near Hagerstown, Md.

For bulldozing, hauling, scraping—for everything—"Caterpillar" Diesel is "the world's FIRST tractor" in road construction and maintenance. The SHOW-DOWN shows why, because it shows that "Caterpillar" is first in power and first in performance . . . first in low operating cost (cuts fuel expense 60 to 80%) . . . first in stamina and low up-keep . . . first in long life. You'll cut costs, speed work, improve

bids with "Caterpillar." The last word in tractors—it's FIRST! Caterpillar Tractor Co., Peoria, Illinois, U. S. A.

#### THE SHOW-DOWN SHOWS THIS

Report from a Massachusetts highway job: "Our 'Caterpillar' Diesel Tractor hauls two 12-yd wagons on a 1200-ft. haul from borrow pit to fill. The average round trip is completed in 12 minutes, over a 20% grade for part of the trip."

Says a Pennsylvania owner: "Our first 'Caterpillar' Diesel Tractors have worked more than 8500 hours each and are still setting records for low-cost operation."

# CATERPILLAR

REG. U. S. PAT. OFF.

## DIESEL



CONSIDER BEFORE YOU DECIDE BETWEEN A LIGHT DUTY

OR

# HEAVY DUTY

DIESEL

● If for stationary service you think only of light duty, high speed engines . . . if you think a heavy duty engine is too big or too expensive for your own needs, read this statement by Fairbanks-Morse, manufacturer of *both* types of engines:

If you want an engine that will be lower in over-all cost . . . if you want an engine capable of continuous duty service . . . consider the F-M Model "32" . . . a heavy duty engine for today's light loads . . . and the heavy duty service of tomorrow.

With their 2-cycle simplicity which eliminates cylinder head valves, F-M Model "32" engines do not have peak and valley efficiencies between grinding periods. With their backflow scavenging, they burn fuel with greater economy. Because they *are* heavy duty, they can be used not only on seasonal and intermittent service, but on long runs during peak operation periods.

Do not permit a mistaken idea of high first costs to keep you from getting the *facts* on the F-M Model "32" *heavy duty* Diesel. For full information, write Department M31, Fairbanks, Morse & Co., 900 S. Wabash Ave., Chicago, Ill. 34 branches at your service throughout the United States.

6779-0A98.115



## FAIRBANKS-MORSE

### *Diesel Engines*

POWER, PUMPING AND WEIGHING EQUIPMENT

Entered as second-class matter at the postoffice, Baltimore, Md., under the act of March 3, 1879, Volume CV, No. 10 Monthly

OCTOBER NINETEEN THIRTY-SIX

8

3



*Buses, too,* ARE SINGING



THE *Swan Song* OF NEEDLESS WEIGHT



...on the highway and boulevard, and in the canyons of the metropolis.

Bus transportation is swifter, smoother, safer, because needless weight is gone. The modern bus is built largely of Alcoa Aluminum.

The goal of the bus operator is to take you where you want to go, quickly, comfortably and at low cost. Lightness is the direct road to that goal.

That is why bus operators build of Alcoa Aluminum.

Alcoa Aluminum is light. Nature made it so. Research has made it strong. Roomy, rigid and durable buses are built of Alcoa Aluminum without needless weight.

For instance, on buses pictured, Alcoa Aluminum saved from four tons in the largest to one ton in the smallest. Even one ton of useless weight is too much. It costs money to haul, for one mile, a thousand, or a million.


Bus operators cannot afford to haul needless weight. They do not have to. They build of Alcoa Aluminum.

Nor can truck operators afford to haul the needless weight of heavy bodies. Alcoa Aluminum makes them both light and strong.

When moving parts of any machine are needlessly heavy, extra power is required. That's inefficient, costly. When portable equipment is heavier than Alcoa Aluminum would make it, every user is forced to do coolie labor in moving that extra, needless weight.

Lightness in moving things is basic economy.

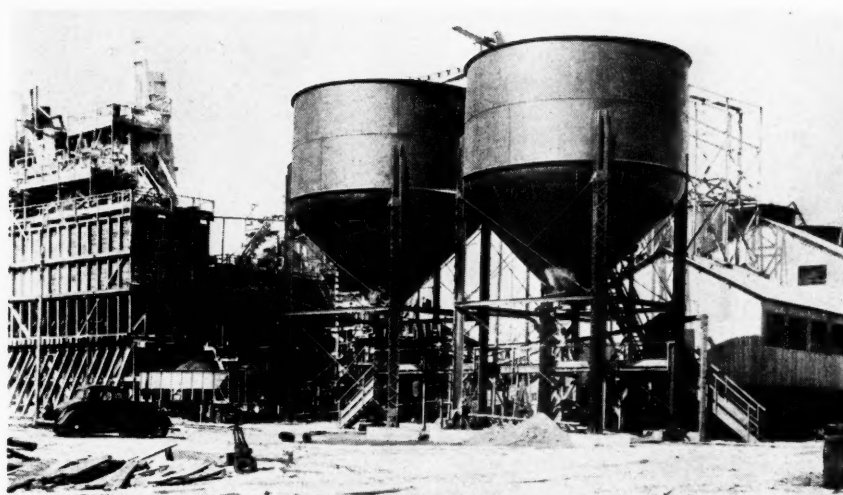
Alcoa Aluminum achieves lightness, with strength, and durability, and resistance to corrosion. To use Alcoa Aluminum most economically, call upon the "knowhow" of our engineers. Aluminum Company of America, 2109 Gulf Building, Pittsburgh, Pennsylvania.

ALCOA  ALUMINUM

# TABLE OF CONTENTS

**OCTOBER  
1936**

Volume CV No. 10



Plant of Swift & Co. Phosphate Mine at Agricola, Fla.

## MANUFACTURERS RECORD

Devoted to the Upbuilding of the  
Nation Through the Development  
of the South and Southwest as the  
Nation's Greatest Material Asset

### *Published Monthly*

by the

**MANUFACTURERS RECORD  
PUBLISHING CO.**

Frank Gould, President

Main Office: Manufacturers Record Building, Commerce  
and Water Streets, Baltimore, Md.

#### Branch Offices:

New York—11 W. 42nd St.

Chicago—28 East Jackson Blvd., Room 1510

Cleveland, Ohio—1745 Wymore Ave.

Telephone—POtomac 2275

Subscription Rate: \$2.00 a year (in advance). Single  
copies, 25c; back numbers, one to six months, 50c each;  
over six months, \$1.00. Combination rate for Manufac-  
turers Record and Daily Construction Bulletin, \$10.50  
a year.

Subscribers are asked to notify us of change in  
address to avoid delay in service.

**PUBLISHERS DAILY CONSTRUCTION BULLETIN AND  
BLUE BOOK OF SOUTHERN PROGRESS**

Member  
A.B.C.

OCTOBER NINETEEN THIRTY-SIX

## EDITORIALS

America's Wealth .....	Cover Page
Farm Imports Break All Records .....	27
Communism .....	28
Skilled Workers Needed .....	28
The South Marches On .....	29

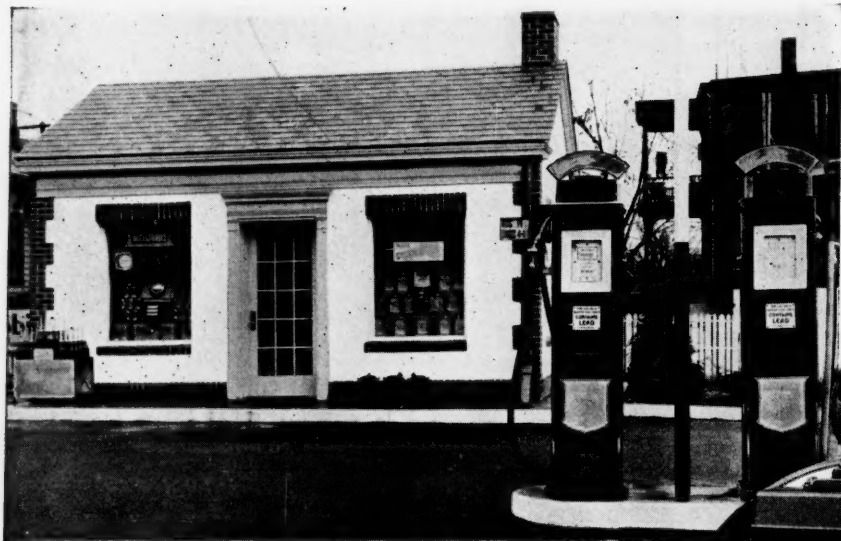
## NEWS and FEATURE ARTICLES

Holding the Scales in Equal Balance... By Thomas W. Martin	30
Social Security Act..... By J. D. Battle	34
New Industrial Horizons .....	35
Southern Paper Developments .....	36
Rail Freight Rate Equality Sought by South .....	38
Growing Movement to Reduce and Equalize Freight Rates in the South .....	By W. L. Thornton, Jr. 39
South Penalized by Adverse Freight Rate Differential By Carl R. Cunningham	39
Progress in Steel .....	By T. M. Girdler 40
Broaden Markets for Cement .....	By Blaine S. Smith 42
Balancing Agriculture With Industry .....	43
\$79,258,000 Construction Awards for September.....	44
Trees for Flood Control .....	68
Brake Shoe Foundry Starts Production at Memphis.....	68
Broadening Agricultural Markets .....	70
Plant Expansion and Modernization .....	72
Pickwick Dam Lock Construction .....	72
Possible Freight Car Shortage .....	78
\$142,000,000 Federal Expenditures for Materials on WPA Projects .....	80

## SPECIAL DEPARTMENTS

Iron, Steel and Metal Market .....	48
Lumber News of the Month .....	50
Good Roads and Motor Transport .....	52
Equipment—New and Improved .....	54
Financial News .....	56
Smiles and Frowns .....	60
Industrial News .....	62
Trade Literature .....	64
Index for Buyers .....	86
Index of Advertisers .....	88





# WESTINGHOUSE

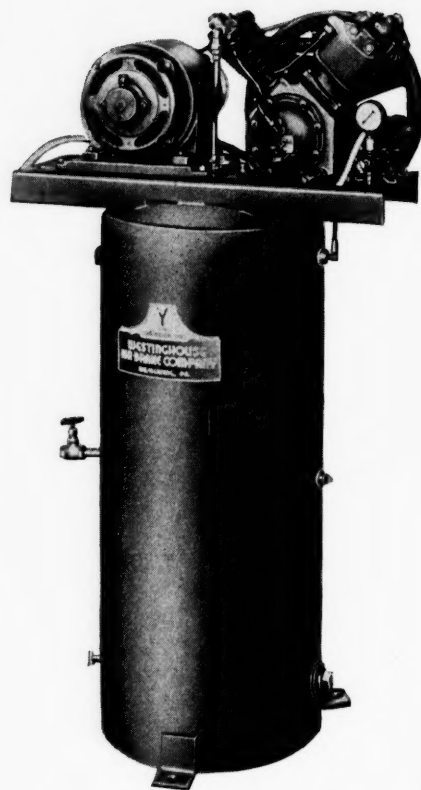
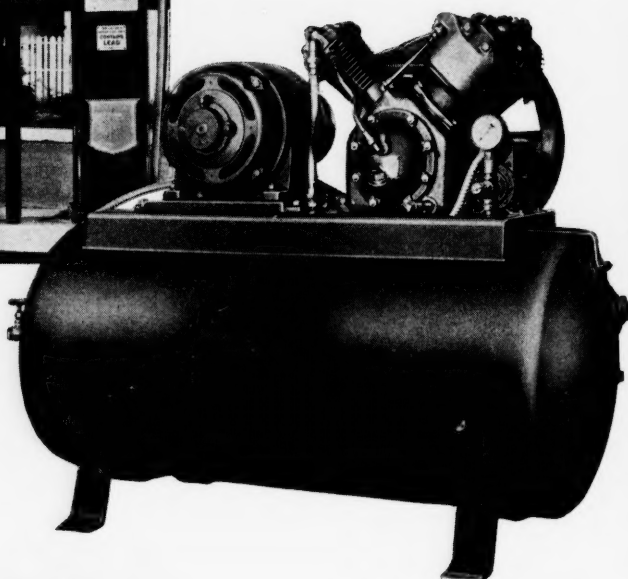


## AIR COMPRESSORS

*For* ... **Garage and  
Service Station**

The "Y" Type Air Compressors are air-cooled for continuous operation at 200 lbs. pressure . . . two-stage, sizes from 4 to 45 cu. ft. . . controlled combined pressure and splash lubrication . . . unloading feature interlocked with lubricating system to prevent delivery of air when oil supply is depleted . . . vertical or horizontal units as conditions require . . . efficient, reliable, and economical for the modern service station or garage.

*Ask for Special Publication 9084*



# WESTINGHOUSE AIR BRAKE CO.

*Industrial Division*

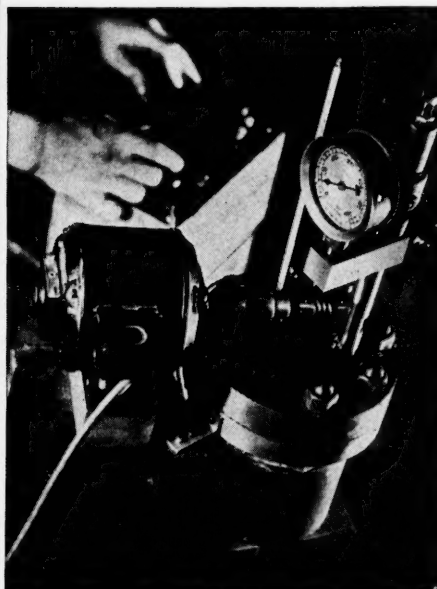
**PITTSBURGH • PENNSYLVANIA**

MANUFACTURERS RECORD FOR

# GULF CRYSTAL CYLINDER OILS

the  
*Ultimate*  
in  
STEAM CYLINDER  
LUBRICANTS

## TO MAKE BETTER STEAM CYLINDER LUBRICANTS



In Gulf's modern research laboratory the equipment shown above is used to determine the static and dynamic coefficients of friction of oils between metals in the presence of saturated or super-heated steam under high pressures. Thus, the most efficient steam cylinder lubricants can be selected for use under a wide variety of operating conditions and better lubricants developed to meet special conditions.

### 4 REASONS... WHY GULF CRYSTAL CYLINDER OILS ARE THE STEAM CYLINDER LUBRICANTS OF UNPARALLELED QUALITY

1. *Refined from selected crudes.* GULF CRYSTAL CYLINDER OILS are manufactured from highly refined, highly filtered Cylinder Oils of outstanding quality.

2. *Better atomization.* GULF CRYSTAL CYLINDER OILS are manufactured to atomize very easily and be carried readily by the steam to all rubbing surfaces.

3. *Minimum Deposits.* The special refining of GULF CRYSTAL CYLINDER OILS minimizes deposits in cylinders and on valves resulting from high temperatures or bad water conditions.

4. *Ease of separation.* GULF CRYSTAL CYLINDER OILS may be readily separated from exhaust steam or condensate. This is important where they are re-used in the plant or where the condensate is returned to the boilers.



INDUSTRIAL  
LUBRICATION

*Would you like to have complete information regarding the use of Gulf Crystal Cylinder Oils in your prime movers? The coupon is for your convenience.*

FOR use in many types of steam engines, Gulf supplies a lubricant of unparalleled quality — Gulf Crystal Cylinder Oil.

Made in four viscosities, highly filtered and specially compounded, these quality lubricants insure maximum protection to steam cylinders under some of the most exacting steam, temperature and operating conditions.

Gulf Crystal Cylinder Oil is made by a special Gulf process which frees the oil of wax and other impurities, greatly increasing its efficiency over oils refined by less effective processes.

Many steam engine operators are reporting substantial reductions in cylinder wear and repair expense after Gulf Crystal Cylinder Oil has been put to work. Give it a trial in your equipment.

## GULF OIL CORPORATION GULF REFINING COMPANY

General Offices, Gulf Bldg., Pittsburgh, Pa.

GULF OIL CORPORATION M.R.-10  
GULF REFINING COMPANY • 3800 Gulf Bldg., Pittsburgh, Pa.

Please give me complete information regarding the use of Gulf Crystal Cylinder Oils in engines of the following types.....

Name.....

Company.....

Address.....

Makers of THAT GOOD GULF GASOLINE  
and GULFLUBE MOTOR OIL

# REDUCING POWER'S WASTE-LINE

## America's Electric Light & Power Companies Learn to Boost Operating Efficiencies

SOME YEARS AGO, central station operators saw their giant turbines running with ordinary steam pressures and temperatures—and speeds of 1800 r.p.m.—and were satisfied. Not so today! Modern steam turbines may use steam at pressures of 1400 lbs. and temperatures of 1000° F.—with speeds of 3600 r.p.m.

Socony-Vacuum aids in this work by providing oils unsurpassed for purity, uniformity and long life. Two significant facts prove this: more than half of all turbines rated 5000 k. w. and over, depend upon Socony-Vacuum products; 14 builders of turbines endorse them.

In all other fields, too, the story of Industry modernizing itself is written in oil—largely by Socony-Vacuum. For, the maker of textiles or automobiles—the aviator or car owner—finds, in Socony-Vacuum's products, values that can't be duplicated; in Socony-Vacuum's 70 years' experience, a powerful aid to efficiency and worthwhile economies.

Thus, comes to light a new rule—coined by men who know machinery and know oil—to safeguard profits and help improve earnings. You will benefit by it. So will your men. It's simple to follow; namely, "Talk With The Socony-Vacuum Representative When He Calls."

*70 Years' Experience Making  
Gargoyle Lubricants  
Mean Correct Lubrication*



# SOCONY-VACUUM OIL Co.

INCORPORATED

STANDARD OIL OF NEW YORK DIVISION • WHITE STAR DIVISION • LUBRITE DIVISION • WHITE EAGLE DIVISION  
WADHAMS OIL COMPANY • MAGNOLIA PETROLEUM COMPANY • GENERAL PETROLEUM CORPORATION OF CALIFORNIA





**TEL. AND TEL.  
REDUCES RATES**

New Tariffs Make Lower  
Charges Effective  
Day Every Sunday

*1926*

**REDUCED RATES FOR  
LONG DISTANCE CALLS**

Will Save \$1,500,000 Annually  
To Telephone Users

*1927*

**\$5,000,000 CUT  
IN U. S. PHONE  
RATES FEB 29**

Reduction  
National  
Company.

*1929*

*and now*

**ANOTHER REDUCTION**

**IN**

**Long Distance**

**RATES**

**Long Distance Rate  
Cut Is Announced**

Promise Public Save  
Of \$5,000,000.

*1930*

**NEW LONG DISTANCE  
TELEPHONE RATES**

Changes Mean Better  
and \$3,000,000 Annual  
Savings to Public.

*1926*

**RATES FOR LONG  
DISTANCE PHONE  
CALLS REDUCED**

Schedule Is Explained  
By District Manager  
Of Company

*1935*

*effective September 1st*

The rates for telephone calls to most points where the station-to-station day rate was over \$1.10 are reduced. Both station-to-station and person-to-person rates—day, night, and all day Sunday—are included in the reduction.

Also on person-to-person calls to most points, the station-to-station additional minute rate applies after six minutes of conversation.

This is the seventh reduction in the rates for Long Distance calls during the last ten years.

A table of representative new and former rates is shown at the right.



TYPICAL 3-MINUTE RATES		STATION-TO-STATION				PERSON-TO-PERSON			
		Day		Night and Sunday		Day		Night and Sunday	
		New	Old	New	Old	New	Old	New	Old
BETWEEN	AND								
Kansas City	St. Louis	\$1.10	\$1.15	\$.65	\$.70	\$1.50	\$1.55	\$1.05	\$1.10
Cleveland	Baltimore	1.30	1.45	.80	.85	1.70	1.85	1.20	1.25
Boston	Washington, D. C.	1.50	1.65	.90	.95	1.90	2.05	1.30	1.35
Chicago	Pittsburgh	1.60	1.80	.95	1.05	2.05	2.25	1.40	1.50
St. Louis	Minneapolis	1.80	2.05	1.05	1.15	2.30	2.55	1.55	1.65
Atlanta	Washington, D. C.	2.00	2.35	1.15	1.30	2.60	3.00	1.75	1.95
Boston	Detroit	2.10	2.55	1.25	1.40	2.75	3.25	1.90	2.10
Chicago	New York	2.50	3.00	1.45	1.65	3.25	3.75	2.20	2.40
Denver	Pittsburgh	4.25	4.75	2.50	2.75	5.50	6.00	3.75	4.00
St. Paul	Seattle	4.50	5.25	2.75	3.00	5.75	6.50	4.00	4.25
Seattle	Dallas	5.25	6.00	3.25	3.50	6.75	7.50	4.75	5.00
Los Angeles	Detroit	6.00	7.25	3.75	4.25	7.75	9.00	5.50	6.00
Cleveland	San Francisco	6.50	7.75	4.00	4.50	8.50	9.75	6.00	6.50
New York	San Francisco	7.50	9.00	4.50	5.50	9.75	11.25	6.75	7.75
Cincinnati	Pittsburgh	1.15	1.20	.65	.70	1.55	1.60	1.05	1.10
Dallas	New Haven	4.50	5.25	2.75	3.00	5.75	6.50	4.00	4.25



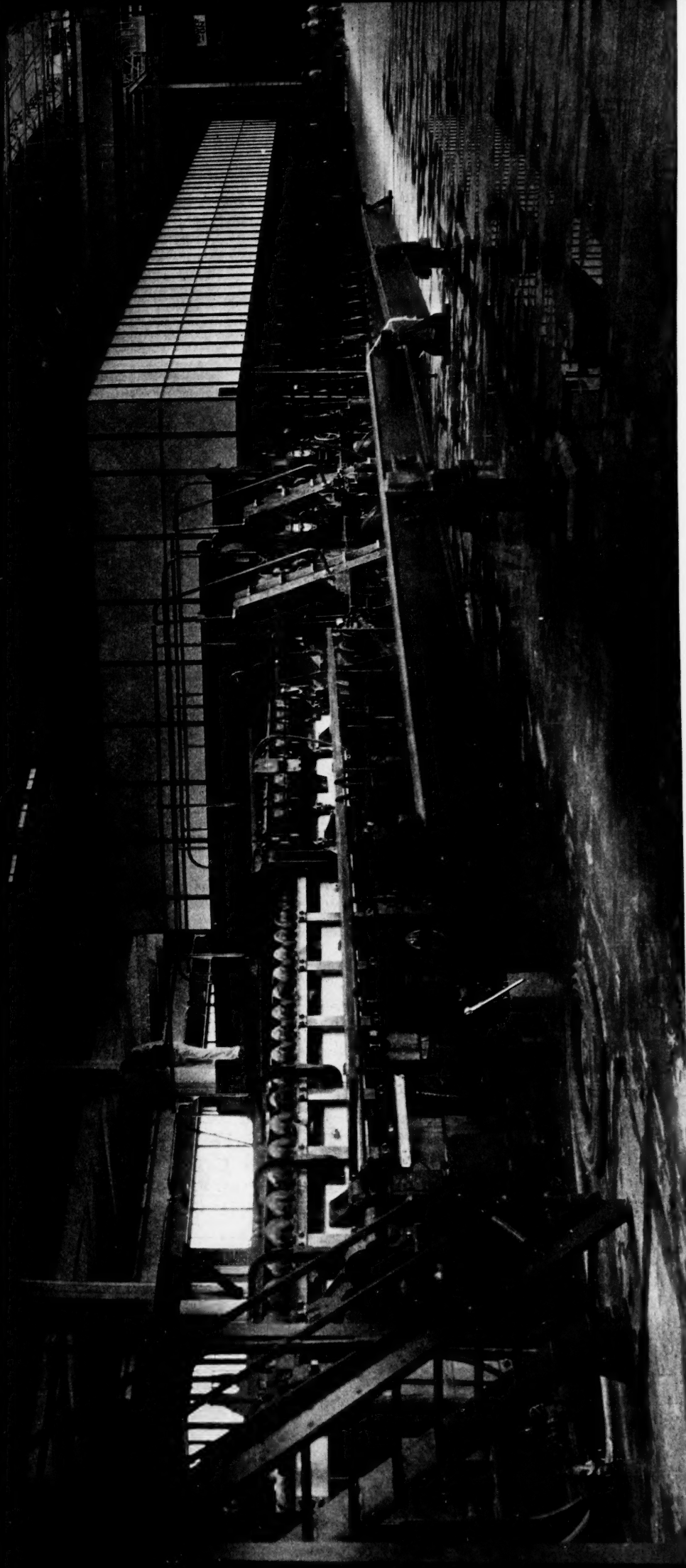
## For those surface grinding jobs

BUILT like grinding wheels, these disc wheels are available in a wide range of controlled gradings to suit the work. All steel plate backings. Mountings that permit operation at high speeds with safety. They are really mounted grinding wheels with practically all their advantages. Made in three types. Write for data.



**THE CARBORUNDUM COMPANY . . . NIAGARA FALLS, N. Y.**

Sales Offices and Warehouses in New York, Chicago, Boston, Philadelphia, Cleveland, Detroit, Cincinnati, Pittsburgh, Grand Rapids  
(Carborundum and Aloxite are registered trade-marks of The Carborundum Company)



For the new plant of the Union Bag & Paper Corporation of Georgia, Pusey Jones designed and built the largest modern high-speed machine ever developed for bag paper. This new machine is now in full operation . . . and a second, duplicate unit is now under construction at Pusey Jones.

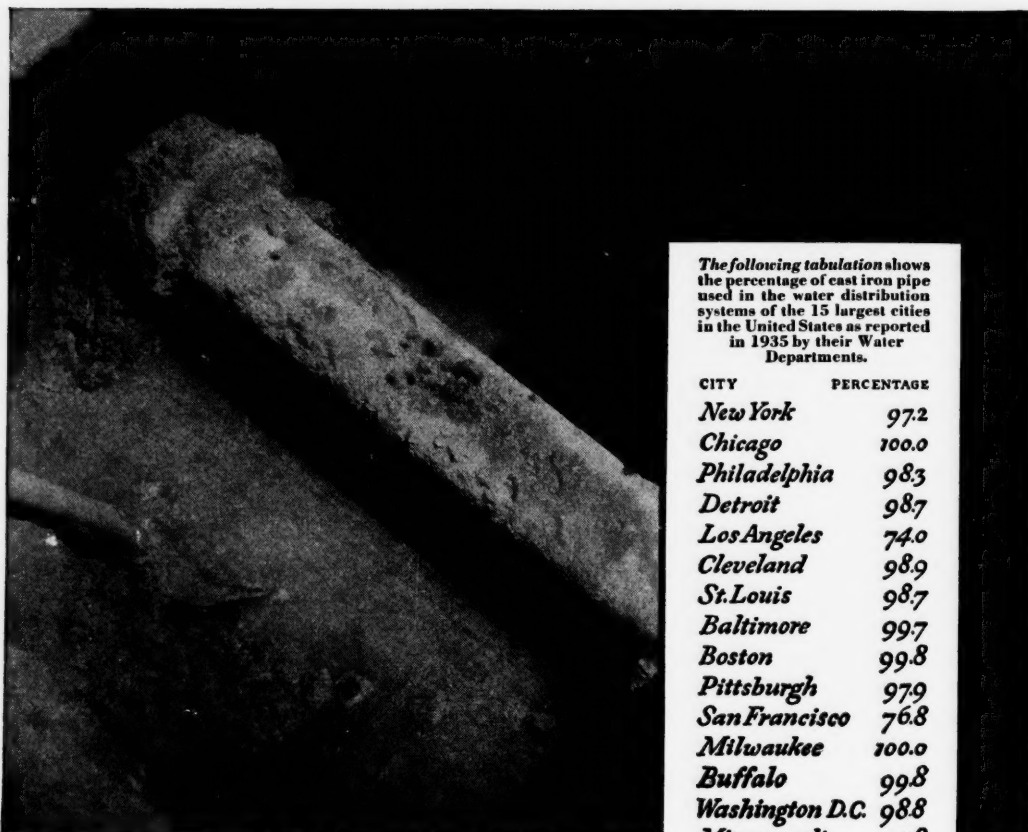
“ask us”

**THE PUSEY AND JONES CORPORATION**  
*Established 1848. Builders of Paper-making Machinery*  
[NEWS-PRINT : BOOK PAPER : KRAFT : BOARD]  
**Wilmington, Delaware, U.S.A.**





# Delivering Water night and day for **106 years !**



Unretouched photograph of a section of 106-year-old cast iron water main still rendering satisfactory service in Philadelphia's distribution system.

The following tabulation shows the percentage of cast iron pipe used in the water distribution systems of the 15 largest cities in the United States as reported in 1935 by their Water Departments.

CITY	PERCENTAGE
New York	97.2
Chicago	100.0
Philadelphia	98.3
Detroit	98.7
Los Angeles	74.0
Cleveland	98.9
St. Louis	98.7
Baltimore	99.7
Boston	99.8
Pittsburgh	97.9
San Francisco	76.8
Milwaukee	100.0
Buffalo	99.8
Washington D.C.	98.8
Minneapolis	95.8

**W**ATER is free if you go and get it. But if you want it at the turn of a faucet you must pay for the service. Less than the price of a soda for a hundred gallons—a very small cost for an efficient and indispensable public service. One of the reasons why water is cheap is the long life and negligible maintenance cost of cast iron water distribution mains. More than 95% of the pipe which distributes water to the 24 million residents of our 15 largest cities is cast iron pipe.

Cast iron is the standard material for water mains. Its useful life is *more than a century* because of its effective resistance to rust. It is the one ferrous metal pipe for water and gas mains, and for sewer construction, that will not disintegrate from rust. Available in diameters from 1¼ to 84 inches. For further information, address The Cast Iron Pipe Research Association, Thos. F. Wolfe, Research Engineer, 1013 Peoples Gas Building, Chicago, Illinois.

## CAST IRON PIPE

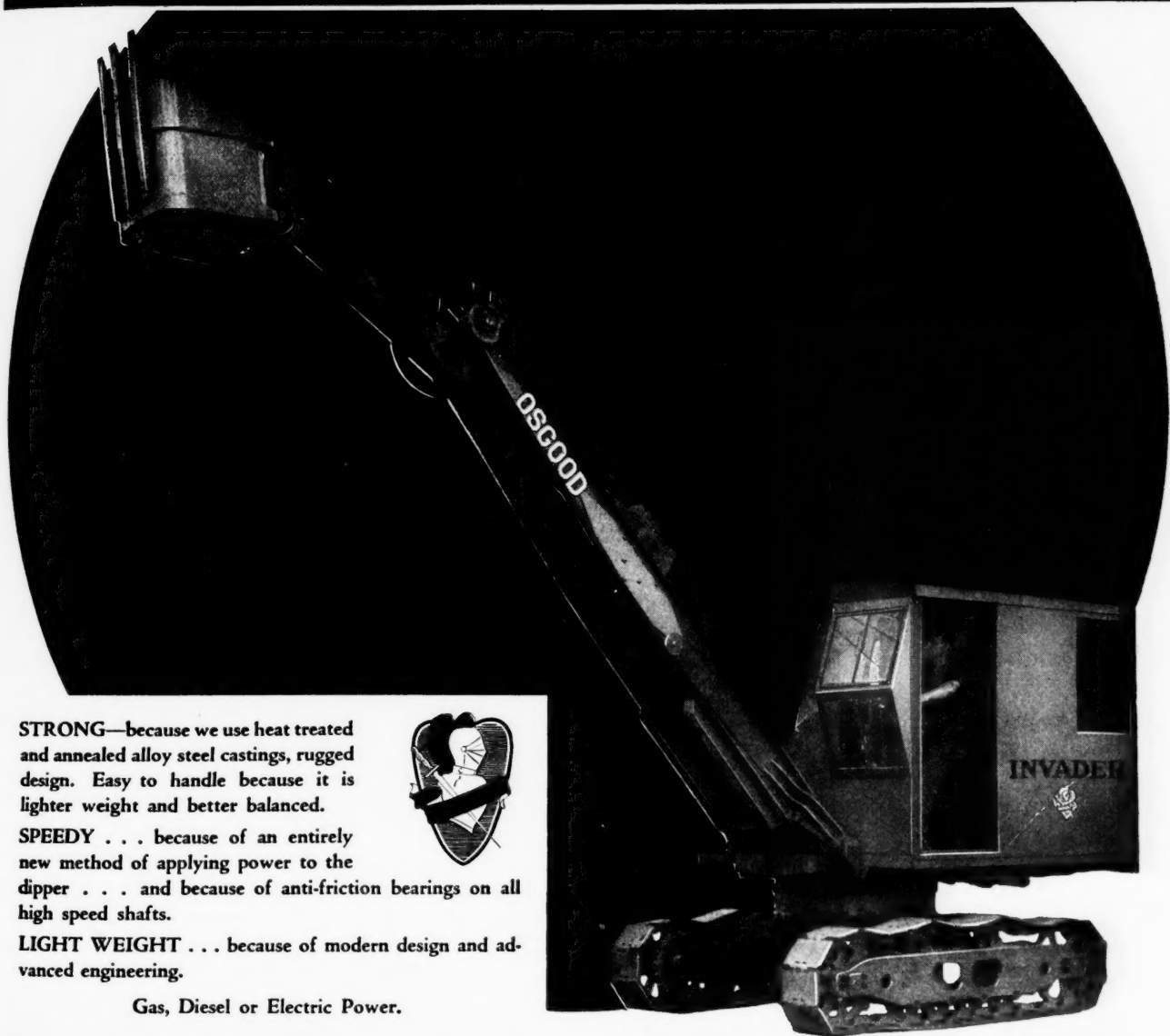
METHODS OF EVALUATING BIDS NOW IN USE BY ENGINEERS



RATE THE USEFUL LIFE OF CAST IRON PIPE AT 100 YEARS

# *Invader is Here!*

## Distributors—Investigate



**STRONG**—because we use heat treated and annealed alloy steel castings, rugged design. Easy to handle because it is lighter weight and better balanced.

**SPEEDY** . . . because of an entirely new method of applying power to the dipper . . . and because of anti-friction bearings on all high speed shafts.

**LIGHT WEIGHT** . . . because of modern design and advanced engineering.

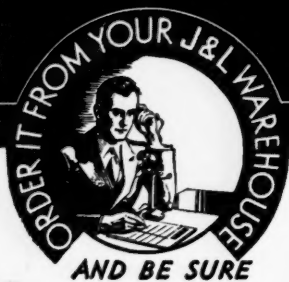
Gas, Diesel or Electric Power.

# INVADER

**THE OSGOOD COMPANY . . . MARION, OHIO, U. S. A.**

OCTOBER NINETEEN THIRTY-SIX

# Save *Time* and *Money* through J&L Warehouse Service



## Quick *Dependable* Service on J&L Steel Products...

When you need steel quickly, for either emergency or regular requirements, you will save time, money and trouble by ordering from one of the J&L Warehouses serving the South.

J&L Warehouse service is fast and complete. Warehouses are strategically located to give you prompt service. Shipments are generally made immediately upon receipt of your order; always within 24 hours.

Warehouse stocks are diversified, complete and carefully classified as to qualities, and trained steel men know exactly what grade will best meet your need.

Special saws, lathes, shears, punches, flame-cutting and fabricating equipment in J&L Warehouses give you steel for your construction, maintenance and repair requirements in ready-for-use form. This saves time and money and helps you avoid costly delays in operation.

Steel users everywhere depend on J&L Warehouses for time-and money-saving quick service. You, too, will profit when you order from your J&L Warehouse.

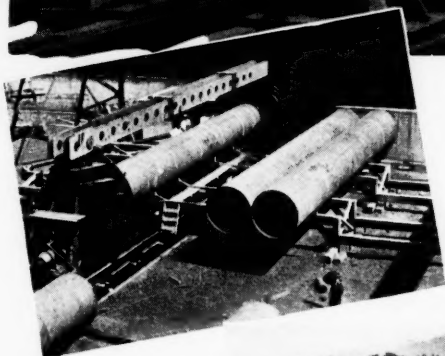
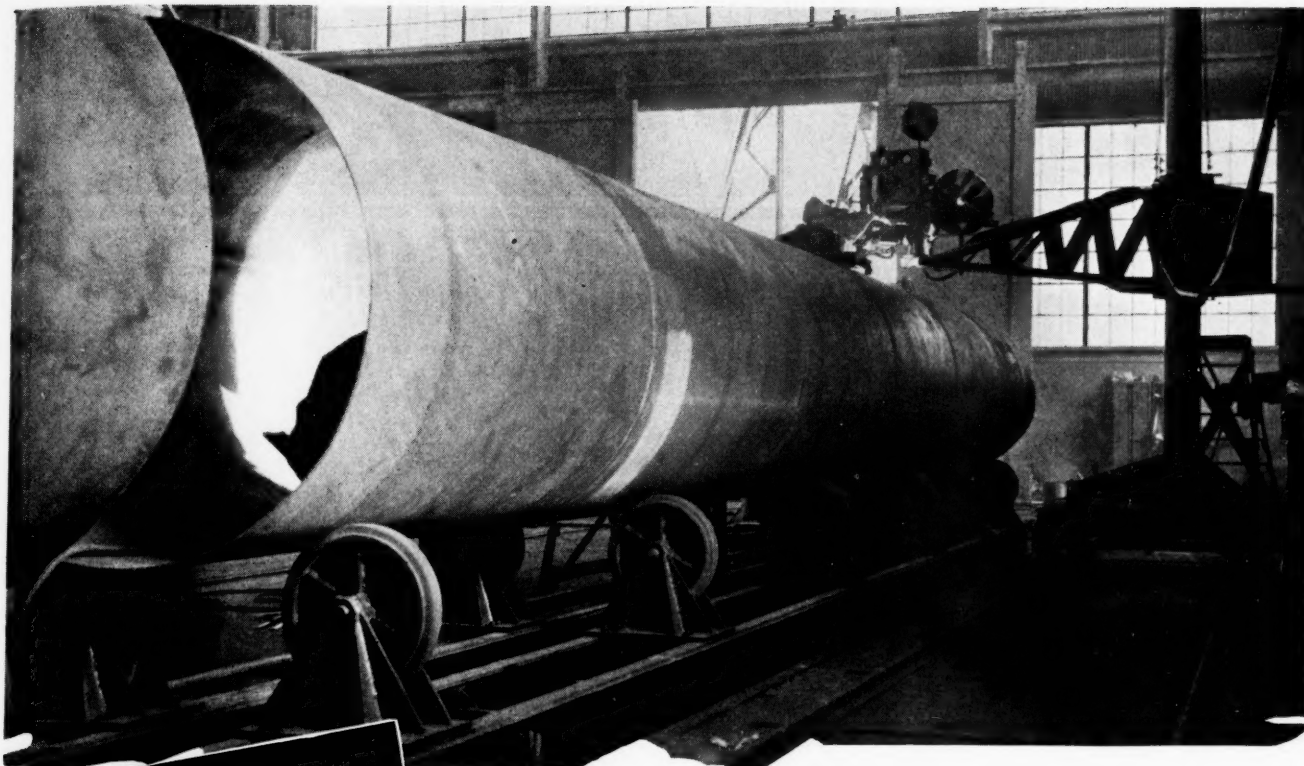
**JONES & LAUGHLIN STEEL CORPORATION**  
AMERICAN IRON AND STEEL WORKS  
PITTSBURGH, PENNSYLVANIA

Serving the South—Sales Offices: ATLANTA CINCINNATI DALLAS HOUSTON  
MEMPHIS NEW ORLEANS PHILADELPHIA PITTSBURGH ST. LOUIS TULSA  
Warehouses: CINCINNATI MEMPHIS NEW ORLEANS PITTSBURGH



MANUFACTURERS RECORD FOR





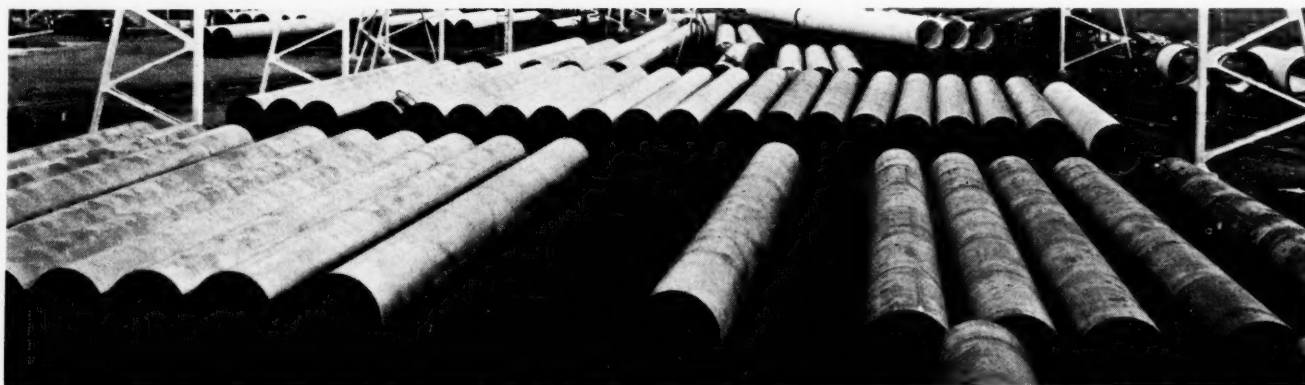
Top: Welding 60 in. diameter pipe. Above: Testing 48 ft. lengths. Right: Arriving at destination. Below: 60 in. pipe in yard ready for shipment.



# STEEL PIPE

*for the Birmingham Industrial Water System*

The accompanying views show the fabrication of 42 to 60 in. diameter welded steel pipe in our plant at Birmingham for the Birmingham Industrial Water System. We are equipped to handle large diameter steel pipe like this of either riveted or welded construction, as well as field erected steel tanks and steel plate work of all kinds. Write our nearest office for quotations.

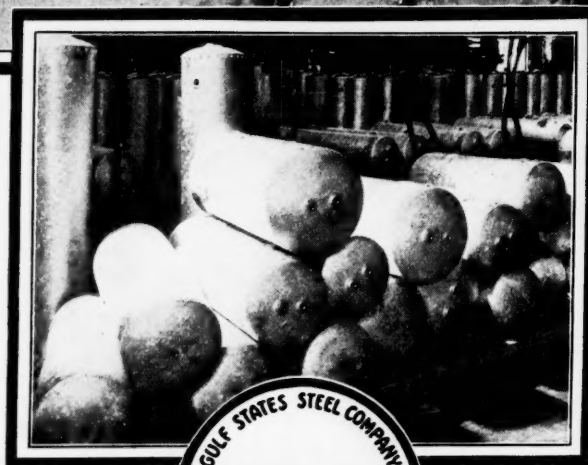
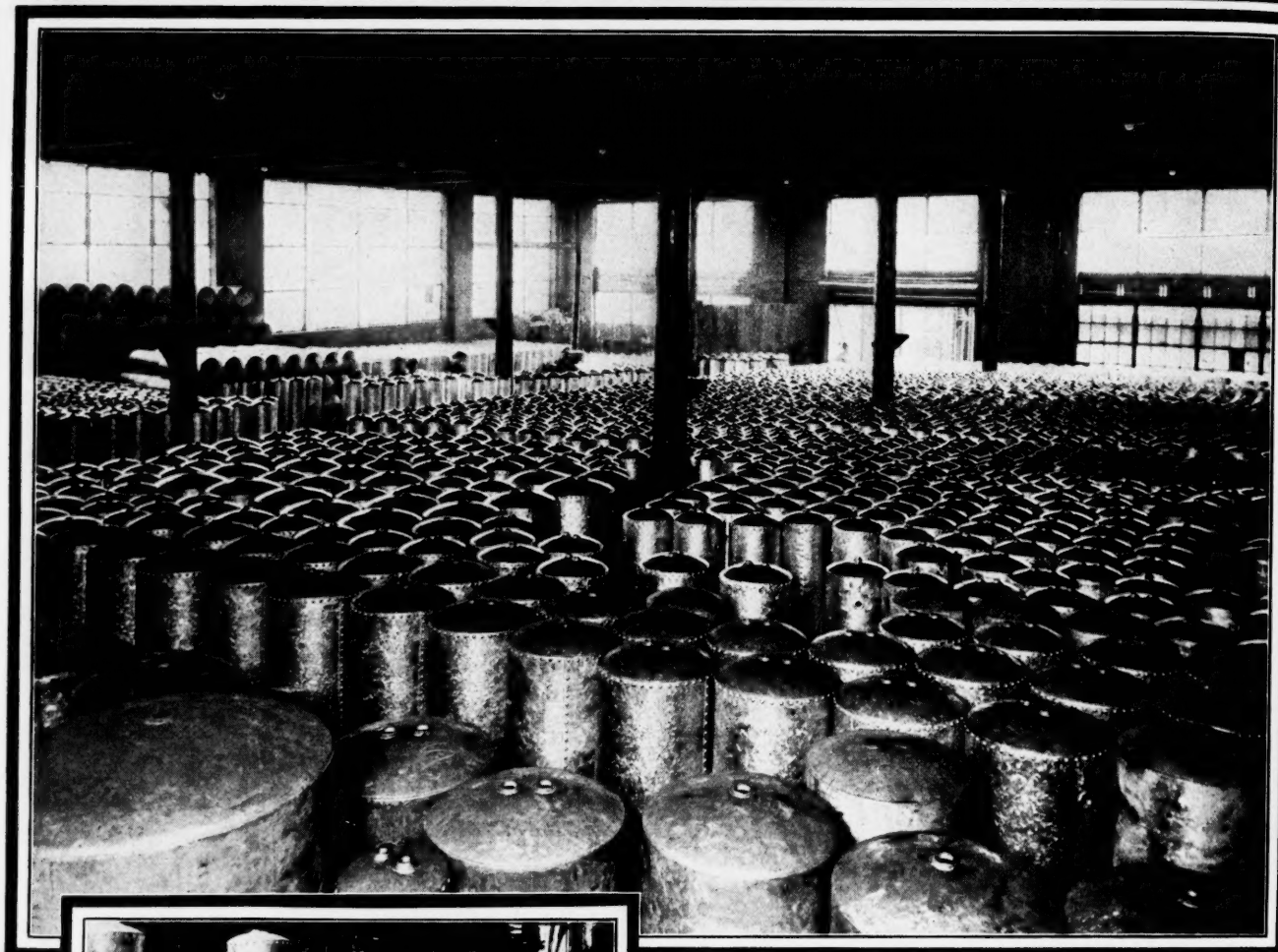


## CHICAGO BRIDGE & IRON WORKS

Birmingham .....	1530 North Fiftieth St.	New York .....	3313-165 Broadway Bldg.	Philadelphia .....	1619-1700 Walnut Street Bldg.
Dallas .....	1408 Dallas Athletic Club Bldg.	Cleveland .....	2216 Rockefeller Bldg.	Detroit .....	1510 Lafayette Bldg.
Houston .....	2919 Main Street	Chicago .....	2106 Old Colony Bldg.	Boston .....	1510 Consolidated Gas Bldg.
Tulsa .....	1611 Thompson Bldg.	San Francisco .....	1040 Rialto Bldg.	Havana .....	Edificio Abreu 402

Plants in BIRMINGHAM, CHICAGO and GREENVILLE, PA.

# "Tanks ♪ A Million"



The impressive array of welded and riveted range Boilers shown in these photographs were all fabricated from GULFSTEEL hot-rolled sheets . . . Successful, profitable fabrication of this type requires a sheet not only of accurate gauge and dimensions, and of good forming and welding properties—but of absolute UNIFORM QUALITY as well . . . More and more fabricators are finding that GULFSTEEL is one sheet that meets these specifications. Gulf States Steel Company, Birmingham, Alabama.

## GULFSTEEL SHEETS

IN ANY KIND OF MACHINERY

# "Eye Appeal" PAYS DIVIDENDS

A MAN won't buy a new machine because his old one isn't good looking. But when he is in the market for new machinery, appearance and eye-appeal play a mighty important part in his selection.

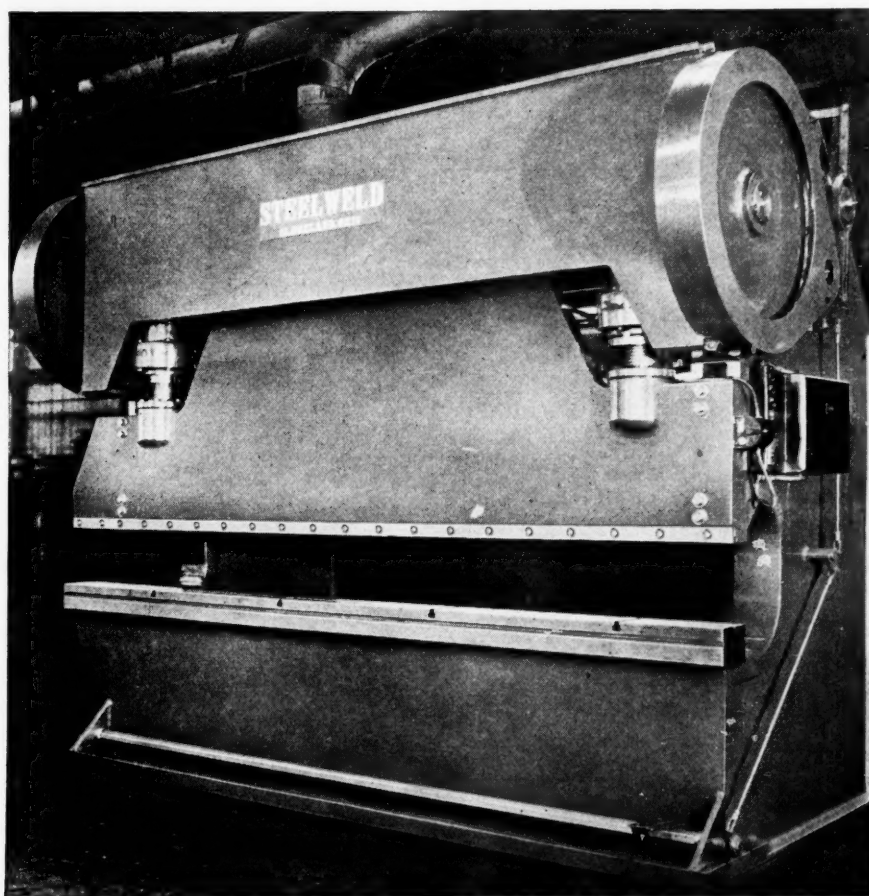
What Rolled Steel and welded construction are doing to modernize machine design, to make modern machinery more attractive, is forcefully shown by the photograph. Here is a brake manufactured by the Cleveland Crane and Engineering Company for the Steelweld Machinery Company.

Notice the smooth, sweeping lines of this new design. See how a new sense of beauty and balance has been obtained by a pleasing proportion of masses. These are the features which are so easily captured in welded steel machinery. It looks modern. It is modern. There is strength and simplicity in its straight lines and smooth, flat surfaces. It shows any

buyer that economy and utility were the governing motifs in design.

If you haven't considered Rolled Steel and welded construction for your product, write for our new book "Rolled Steel For Machine Construction." Find out how readily adaptable Rolled Steel really is.

HERE IS a brake manufactured by the Cleveland Crane and Engineering Company for the Steelweld Machinery Company. This new machine shows what Rolled Steel and welded construction are doing to modernize machine design. Notice the smooth, sweeping lines of this new design—its beauty and balance—both features of welded steel machinery.



CARNEGIE-ILLINOIS STEEL CORPORATION, Pittsburgh and Chicago

COLUMBIA STEEL COMPANY, San Francisco, California

TENNESSEE COAL, IRON & RAILROAD COMPANY, Birmingham, Alabama



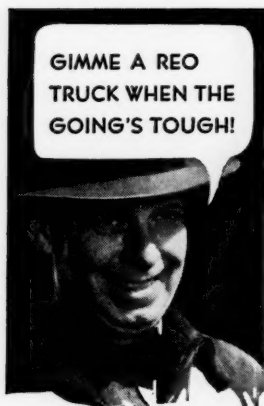
Columbia Steel Company, San Francisco, Pacific Coast Distributors • United States Steel Products Company, New York, Export Distributors

## UNITED STATES STEEL



# "HIGH-BALLING" OR HEAVY HAULING

## —A REO TRUCK CAN TAKE IT!



GIMME A REO TRUCK WHEN THE GOING'S TOUGH!

Reo Speedwagons and Trucks range from  $\frac{1}{2}$  to 4-6 tons. Chassis prices from \$445 up, f. o. b. Lansing, plus tax.  $\frac{1}{2}$ -ton chassis, f. o. b. Lansing, plus tax.

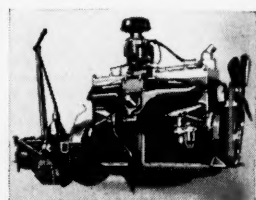
**R**EGARDLESS of how varied or tough the tasks you assign it, the rugged Reo truck can be depended upon to come through with flying colors.

Reo trucks are built from the ground up for heavy duty purposes. Their sturdy Reo Gold Crown and Silver Crown truck engines have extra strength and wearing qualities built in at every point. They are *tough truck engines* designed specifically for tough truck service. On the road and on your cost sheets, they prove their ability to make money and save money on every hauling job.

Every heavy duty Reo truck has a husky 7-bearing crankshaft. Two-speed rear axles, 5-speed transmissions and double-reduction axles are now available. Consult the nearest Reo dealer on your truck requirements. He will help you select the truck that is "tailor-fitted" to your needs. Call him today. There is no obligation.



Climbing grades up to 45%! Two Reo trucks, loaded to full rated capacity, climb Stone Mountain over rocks and boulders.



Reo Speedwagons and Trucks are powered with rugged, economical, Reo-built Gold Crown or Silver Crown truck engines. For 1936, these famous motors have been made even more efficient.

# America's Toughest Truck!



In repeated tests, a 1936 Reo 2-3 Ton Truck, equipped with the Reo Gold Crown Engine, pulled an 80-ton load without laboring!

# REO SPEEDWAGONS AND TRUCKS

MANUFACTURERS RECORD FOR

# This pipe has shed its Scale . . . *two hands full*



## NATIONAL Scale Free PIPE *"It's Spellerized"*

**N**ATIONAL Scale Free Pipe is exactly what the name implies . . . *pipe free of mill scale*—clean and smooth inside as well as out.

In all NATIONAL butt-welded Pipe (Sizes  $\frac{1}{2}$  inch to 3 inches) a special process invented and developed by National Tube Company mechanically removes the welding scale from both interior and exterior. The pipe

reaches you smooth and clean. No scale is left to clog small orifices, to injure meters, or otherwise interrupt service. Damage to valves is prevented. By getting rid of mill scale, which is strongly electro-negative to pipe metal, we eliminate the prime source of corrosion, pitting, and pipe deterioration. That is why NATIONAL Scale Free Pipe lasts longer in ser-

vice, maintains its ability to deliver full capacity, keeps pipe line maintenance low.

NATIONAL Scale Free Pipe is strong and ductile, threads well, flanges readily, coils and bends satisfactorily. It is uniform in metallic structure, in diameter and wall thickness. Thorough testing and inspection assure its high quality.

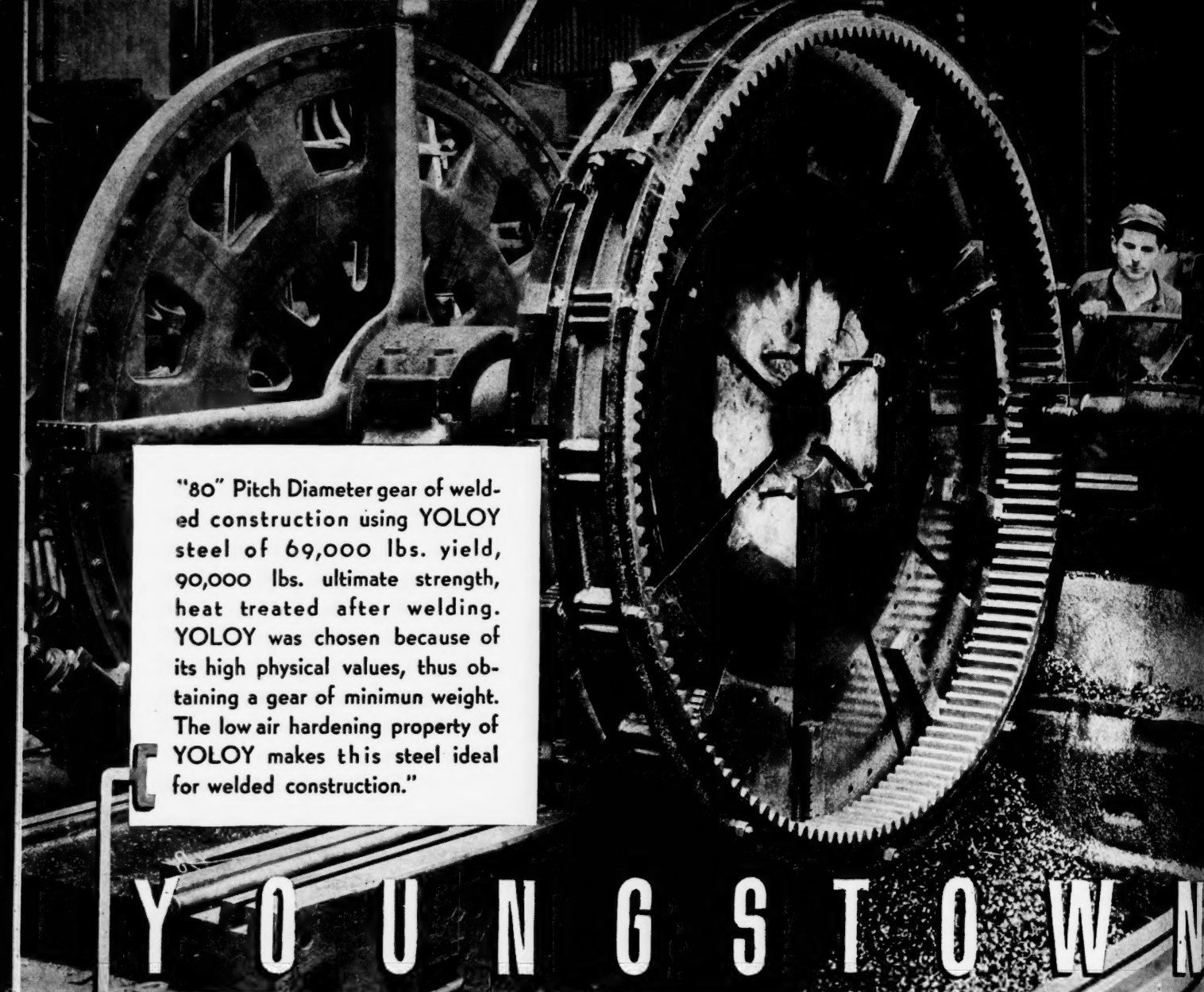
## NATIONAL TUBE COMPANY

PITTSBURGH, PA.



Columbia Steel Company, San Francisco, Pacific Coast Distributors • United States Steel Products Company, New York, Export Distributors

# UNITED STATES STEEL



"80" Pitch Diameter gear of welded construction using YOLOY steel of 69,000 lbs. yield, 90,000 lbs. ultimate strength, heat treated after welding. YOLOY was chosen because of its high physical values, thus obtaining a gear of minimum weight. The low air hardening property of YOLOY makes this steel ideal for welded construction."

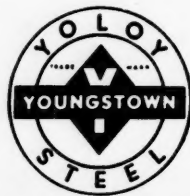
Y O U N G S T O W N

**"THE LOW AIR HARDENING PROPERTY OF YOLOY MAKES THIS STEEL IDEAL FOR WELDED CONSTRUCTION." . . .**

Why The Wellman Engineering Co., selected YOLOY for six internal gears of the type shown above is stated in their own words in the panel above.

YOLOY, the nickel-copper alloy steel produced exclusively by YOUNGSTOWN, is completely described in a special YOLOY bulletin.

Write for it today.



HIGH TENSILE STEEL  
**YOLOY**

THE YOUNGSTOWN SHEET AND TUBE CO.  
Manufacturers of Carbon and Alloy Steels  
General Offices - YOUNGSTOWN, OHIO  
Sheets; Plates; Tubular Products; Conduit; Tin Plate; Bars;  
Rods; Wire; Nails; Unions; Tie Plates and Spikes.

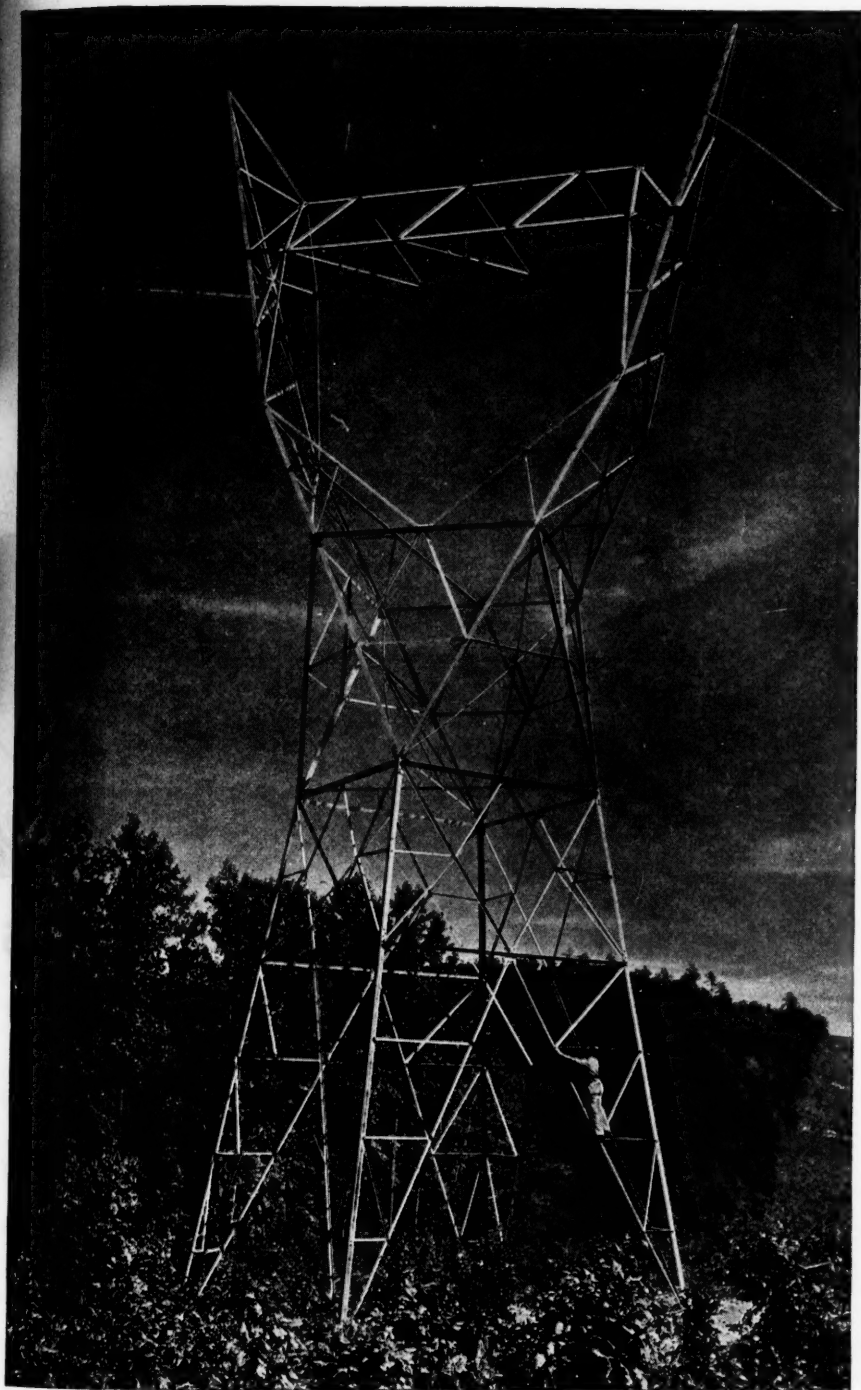
Furnished in sheets, strip, plates, bars, shapes, manufacturer's and welding wire, seamless and electric weld pipe



## TOWERS OF ROTATED TYPE

# *carry 140 Miles*

## OF TVA LINE



140 MILES of the transmission line from Norris Dam in Tennessee to Wilson Dam in Alabama, is suspended on steel towers of the rotated type. A single circuit high voltage line now carries 154 K V, with 2 lines of ground wires. Suspension towers vary in height from 58 feet to 110 feet and are designed for a maximum span of 1200 feet. They were designed by the American Bridge Company for the Tennessee Valley Authority. Plain materials were furnished by Carnegie-Illinois Steel Corporation and Tennessee Coal, Iron & Railroad Company.

The Tower Department of the American Bridge Company has technical personnel, galvanizing facilities and modern fabricating and erecting equipment for any tower or substation project you may have. In addition, A B C has equipment for "full size" tests of even the largest towers in present day use.

AMERICAN BRIDGE COMPANY, Pittsburgh • CARNEGIE-ILLINOIS STEEL CORPORATION, Pittsburgh and Chicago • TENNESSEE COAL, IRON & RAILROAD CO., Birmingham, Ala.

*Pacific Coast Distributors:* Columbia Steel Company, San Francisco • *Export Distributors:* United States Steel Products Co., New York

*One of the hundreds of rotated towers carrying the line between Norris Dam and Wilson Dam*



# UNITED STATES STEEL

OCTOBER NINETEEN THIRTY-SIX

DELIVER TO: *Universal Manufacturing Co.*

CONTENTS: *Transmission Belting*

500 Ft. of Lower Operating Cost  
and Pre-tested Performance

**HEWITT RUBBER CORPORATION**  
BUFFALO, NEW YORK

ask  
about the  
**HEWITT**  
PROOF TEST  
PLAN

● What are you looking for in transmission belting? If it's ability to take rough going, to withstand terrific punishment, to give uninterrupted service, then benefit by the experience of countless other plant operators. Specify HEWITT. For HEWITT belting is built to give you longer service and reduce your operating costs... and that's exactly what we mean. Before the HEWITT label is permitted to be placed on any piece of belting, that product is subjected to withering tests, far more severe than any encountered in your service, to make certain that in actual use its performance will fulfill HEWITT's

promise of super service. Make it a point to discuss transmission belting with your HEWITT distributor. You will find him listed in the current classified telephone directories of major industrial centers under "Rubber Goods" or "Belting". And don't miss an explanation of the HEWITT Proof Test Plan.

# HEWITT

**RUBBER CORPORATION**  
**BUFFALO, NEW YORK**

HOSE • CONVEYOR AND TRANSMISSION BELTS • PACKING

# Burroughs



## BURROUGHS TYPEWRITER ACCOUNTING MACHINE

Writes check (or pay envelope), earnings record, employee's statement and payroll summary in one operation. Column selection automatically controlled. All totals accumulated. This machine is only one of several models; payroll work is only one of the many jobs they do.

**SIMPLIFIES  
PAYROLL ACCOUNTING**  
*and gives you the additional  
information required by the*  
**SOCIAL SECURITY  
ACT**



## BURROUGHS DESK BOOKKEEPING MACHINE

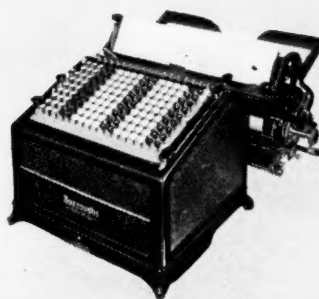
Posts earnings records, automatically prints dates in proper columns, automatically subtracts deductions—calculates net pay. Can also be used as a fast, practical adding-subtracting machine for all kinds of accounting work. Many styles and many models—all low in price.



## BURROUGHS CHECK-WRITING TYPEWRITER

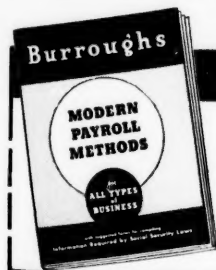
Writes payroll checks in units or in strips. Payroll summary completed in same operation. Fast and easy insertion and removal of checks. Can also be used as a typewriter for correspondence and general typing. Electric carriage operation. Several models.

**B**URROUGHS offers many new and improved machines which not only supply the additional payroll information required by the Social Security Act, but also handle the entire payroll job with exceptional speed, ease and economy. It will pay you to investigate these new machines. Telephone the local Burroughs office, or send for the new payroll folder described in the coupon below.



## BURROUGHS AUTOMATIC PAYROLL MACHINE

Writes check (or pay envelope), employee's earnings statement, earnings record and payroll summary in one operation. Accumulates all necessary totals, automatically ejects and stacks checks in order. Many models for payroll work, as well as for scores of other accounting jobs.



## SEND FOR THIS NEW PAYROLL FOLDER!

BURROUGHS ADDING MACHINE COMPANY, 6743 SECOND BLVD., DETROIT, MICH.

Send me the new folder "Modern Payroll Methods," illustrating complete payroll accounting methods, with typical forms for maintaining the information required by the Social Security Act. The forms show representative entries and suitable column headings.

Name \_\_\_\_\_ Address \_\_\_\_\_



# The New Sky-line in American Building... *enduring* **CONCRETE**

Construct your new building as a monolith—firesafe, permanent, economical. That's the thrifty, modern way to build . . . walls and ornamental detail integral with frame and floors.

A new building of architectural concrete will reduce fire hazard and insurance rates, insure permanently low maintenance . . . eliminate vibration and remove floor load handicaps—to say nothing of bettering working conditions and giving you a more efficient layout.

And beyond all this a distinctive building of architectural concrete will have great prestige value.

Ask your architect and engineer about this money-saving technique. Or write for one of our engineers to call. Free illustrated booklet, "*Beauty in Walls of Architectural Concrete*," on request.

## PORTLAND CEMENT ASSOCIATION

Dept. A10-21, 33 W. Grand Ave., Chicago, Ill.



*A distinctive exterior of architectural concrete—the new printing and engraving plant of Clarke & Courts, Houston, Texas. Joseph Finger, architect. Southwestern Construction Company, builders. Walter P. Moore, structural engineer.*

*Architectural Concrete*

FRAME AND FLOORS CAST INTEGRAL  
WITH EXTERIOR WALLS AND ORNAMENT

Paper Industry.  
will increase in the civil  
to be held October 1 in  
to dedicate the new \$7,000,-  
paper and bag plant of the  
generally declared and con-  
this is not only an event  
importance to Savannah and  
but spotlights a new in-  
era for the South, where, it  
estimated, something near \$50,000,000  
been invested in this industry  
last 18 months.

### IN SOUTH HIGHEST LEVELS

Between 1931 and  
Broken By Contracts  
For This Year.

### PLANT PLANNED

more, Sept. 6.—(AP)—The  
Manufacturers Record reported to-  
day that engineering and general  
construction contracts awarded in  
Southern states during the first  
eight months of this year amounted  
to more than the total of any year  
from 1931 through 1934.

the record, organ of the con-  
struction industry, said that con-  
tracts during August totaled \$70,-  
000 in the south. This brings the  
total for 1936 to \$577,000,000, only  
\$200,000 less than the \$617,000,-  
000 of 1935.

### ENTERPRISE

### ERN BUILDING NEW STRIDE

action For First 8 Month:  
More Than Any Year  
Of 1931-34

BALTIMORE, Sept. 6.—(AP)—The Man-  
ufacturers Record reported today that  
engineering and general construction  
contracts awarded in Southern states  
during the first eight months of this  
year amounted to more than the total  
of any year from 1931 through 1934.

### AN HIGHWAY BUILDING

ay program for the current fiscal  
year is an expenditure of more than  
\$100,000,000. It is a good investment for the  
people to make. Nothing for which  
more money is spent will pay a larger return  
in the years. The south is keeping abreast  
of the progress. The southern states spent  
approximately \$350,000,000 last year on road  
construction and exhibit of the American  
Road Builders' association will be held in  
New Orleans, during the week of January 11.  
The first time the association has ever met in  
the south. President William T. Chevalier is  
being elected. The Manufacturers Record as saying:  
The New Orleans convention must supply all the  
information that road builders desire in  
connection with highway administration and maintenance.  
Engineering, construction and other allied subjects  
it is necessary for the latest information  
and other allied subjects

## SOUTH SETS FAST PACE IN BUILDING

Contracts for First  
Months of Year Ex-  
ceed Any of Recent Years

Baltimore, Sept. 6.—  
The Manufacturers Record re-  
ported today that engineering and  
general construction contracts  
awarded in Southern states during  
the first eight months of this year  
amounted to more than the total  
of any year from 1931 through 1934.  
The Record, organ of the con-  
struction industry, said that con-  
struction during August totaled \$70,-  
000 in the south.

## NEW PAPER MILL TO BE OPENED EARLY IN 1937

Houston's new paper mill, the  
Champion Paper and Fibre Com-  
pany, being constructed on the  
Ship Channel near Pasadena, is  
expected to start production early  
in 1937, possibly in January or  
February, the Daily Construction  
Bulletin, in its September issue,  
quotes Reuben B. Robertson, Jr.,  
executive vice president, as saying.

Five hundred men will be given  
employment by the mill, which  
will have an annual pay roll of  
around \$720,000.

## BUILDING GAIN OVER

Observers Predict  
Of Construction  
Continue Through

BALTIMORE, Sept. 6.—(AP)—  
The Manufacturers Record reported  
today that engineering and general  
construction contracts awarded in  
Southern states during the first  
eight months of this year amounted  
to more than the total of any year  
from 1931 through 1934.

## CONSTRUCTION IN SOUTH AT PEAK

Highway Awards Lead  
As Year's Contracts  
Pass \$70,000,000

BALTIMORE, Sept. 6.—(AP)—  
The Manufacturers Record reported  
today that engineering and general  
construction contracts awarded in  
Southern states during the first  
eight months of this year amounted  
to more than the total of any year  
from 1931 through 1934.

## SPARTANBURG HELD

The South's Pine Timber

Some interesting facts relating to  
Southern forest products are found in  
the latest issue of the Manufacturers Record.  
The largest part of the world's supply  
of pine—rosin and turpentine. The  
century. It was transferred to the  
great producer of the sap from which  
turpentine are made. At present  
more than 55 per cent of the rosin  
line of the world, a large part of which  
is produced in pine forests also are contribut-  
ing quantities of lumber to American in-  
dustries.

## COMMERCIAL APPEAL

## BUILDING CONTRACTS HIT PEAK IN SOUTH

Awards for 8 Months Exceed  
Any Year, 1931-34

BALTIMORE, Sept. 6.—(AP)—  
The Manufacturers Record reported  
today that engineering and general  
construction contracts awarded in  
Southern states during the first  
eight months of this year amounted  
to more than the total of any year  
from 1931 through 1934.

## NASHVILLE BANNER

## REAT SOUTHERN INDUS

vannah, Ga., will hold a great civ-  
il in October 1 to dedicate the new \$7  
paper and bag plant of the Union B  
Corporation. Before completion  
it, at a cost of about \$4,500,000, a  
operation was announced.  
Georgia citizens \$1,500,000 annuall  
and goods purchased; nearly  
will be employed.

South, as it affords striking proof of the ex-  
pansion of pine pulp and paper making in  
Southern States, where approximately \$40,000,000  
invested in new establishments in the past year  
that started recent definite action in other part  
of the South.  
The South has already become the leading  
there are seven great pulp and paper mills under  
way or in prospect. Construction is being pushed  
in Florida, South Carolina, Texas, North Carolina  
and Georgia.

# The SOUTH READS the MANUFACTURERS RECORD

Month after month, the Southern press  
quotes the MANUFACTURERS RECORD.

The South also reads its own daily and Sunday newspapers. The  
editors of the Southern press also recognize news when it is news. As  
a consequence, the MANUFACTURERS RECORD is one of the  
most widely quoted business papers.

Its fifty-four years of constructive editorial excellence and sane  
conservatism have built a prestige second to none. Southerners refer to  
the MANUFACTURERS RECORD with almost reverential feeling.  
The MANUFACTURERS RECORD IS PART OF THE SOUTH.  
Its pages reflect the SOUTHERN SPIRIT.

Immediately subsequent to the distribution of each month's issue of  
the MANUFACTURERS RECORD, editorial reference and comment  
appear widely in Southern newspapers. Leading editorials are  
reprinted verbatim or are paraphrased to meet the requirements of the  
various individual editors.

Readership establishes leadership. Alert advertisers demand leader-  
ship in advertising media. The MANUFACTURERS RECORD stands  
preeminent in its field. Your use of its advertising pages places you  
on the preferred list of Southern buyers—and they are legion.

Write or wire for advertising rates and specific information on the  
Southern markets.

## THE FLORIDA TIMES-UNION, JACKSONVILLE

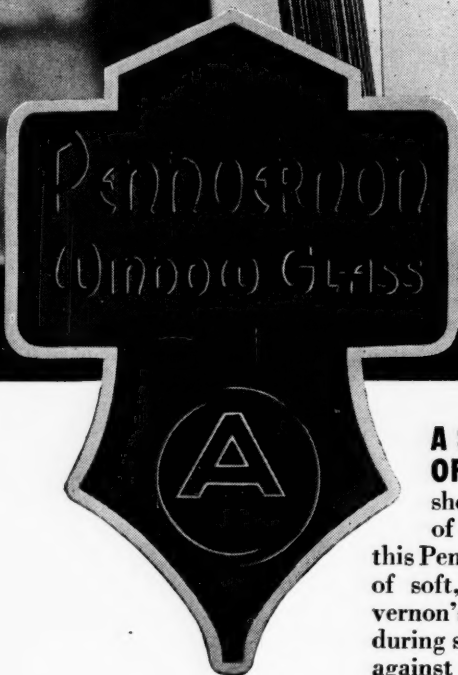
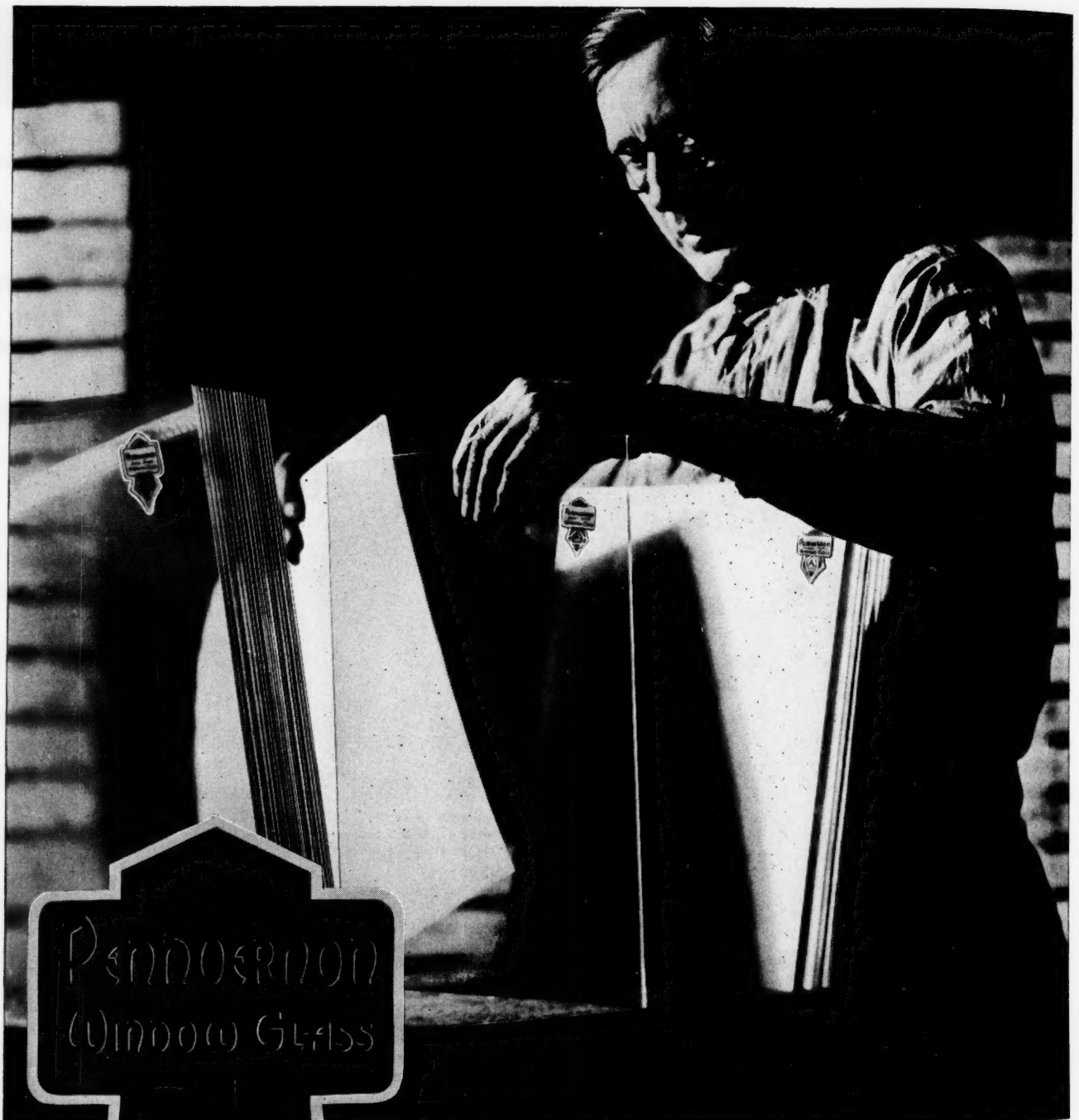
### LOST COTTON MARKETS

"Recent gains in cotton consumption and exports have  
been encouraging," declares the Manufacturers' Record.  
"The cotton situation, however, is not so bright when pres-  
ent production and consumption figures are compared  
with previous decades and markets." The Record goes  
on to tell that with American cotton production actually less  
than it was twenty-five years ago, and with the decrease  
in consumption far greater than the lower production  
figures indicate, there has been a population increase in and

South, as it affords striking proof of the ex-  
pansion of pine pulp and paper making in  
Southern States, where approximately \$40,000,000  
invested in new establishments in the past year  
that started recent definite action in other part  
of the South.  
The South has already become the leading  
there are seven great pulp and paper mills under  
way or in prospect. Construction is being pushed  
in Florida, South Carolina, Texas, North Carolina  
and Georgia.



# Use "PennvernON"...not just "window glass"



**A SHEET OF PAPER... A SHEET OF GLASS...** and then another sheet of paper! Between every light of PennvernON Glass and the next, this PennvernON Craftsman places a sheet of soft, absorbent paper. Thus PennvernON's original excellence is preserved during shipment and storage... protected against moisture, chemicals, scratching.

Our new booklet, called "The Making of a Leader", describes in dramatic pictures the manufacture of PennvernON Window Glass. To get your free copy of this interesting book, sign and mail this coupon to

**PITTSBURGH  
PLATE GLASS COMPANY**  
2155A Grant Building, Pittsburgh, Pa.

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_



# • Manufacturers Record •

## FARM IMPORTS BREAK ALL RECORDS

THE farmers of the country have been reminded that cash income from agriculture during 1936, including Government payments, is estimated by the Bureau of Agricultural Economics at \$7,850,000,000. This compares with \$7,090,000,000 for the calendar year 1935. While this added buying power for American agriculture is to be desired, there are some adverse factors that need to be considered.

American farmers are capable of producing all the staple crops consumed in the United States. In the past they have been heavy exporters, but this, one of the greatest grain producing countries of the world, is now importing more wheat than in any previous year in the country's history. It is estimated that approximately 42,500,000 bushels of wheat will be bought in 1936 from abroad for American consumption. Also, a great quantity of corn will be needed to supplement our deficient grain supply. Not alone in wheat and corn but in other principal grains the United States has been forced to increase its purchases from foreign countries following a shortage due to the drought and intensified by the AAA crop restriction policy.

As it is estimated that 50,000,000 bushels of wheat, lost in 1934 because of the "plow under" campaign and crop reduction policy, would have been sufficient to tide the country over despite the drought of that year, there would be no need to purchase from abroad over 42,000,000 bushels of wheat in 1936.

Our mounting imports of grain are indicated in the following:

### PRINCIPAL GRAIN IMPORTS

	1932	1933	1934	1935
	Bushels	Bushels	Bushels	Bushels
Wheat .....	10,072,000*	10,387,000*	18,746,000*	38,870,000
Corn .....	344,000	160,000	2,959,000	43,242,000
Oats .....	59,000	132,000	5,580,000	10,106,000
Rye .....		8,006,000	7,622,000	9,642,000
Barley .....		24,000	6,580,000	4,839,000

\*Including wheat for reexport.

Indications are that there will be a greater increase in wheat and corn imports during 1936. Not only have

we been compelled to import more grains and their preparations but other agricultural products, which this country can produce in abundance, have been bought in increasing quantities from foreign countries.

Last year we increased our general purchases from abroad compared with 1934. The average 1930-1934 farm and related imports are as follows:

	Percentage Increase	
	1935 over 1934	1935 over 1930-1934 Average
	%	%
Corn .....	1,361	3,735
Wheat .....	109	160
By-products feeds of wheat....	73	56
Oats .....	81	673
Pulpwood .....	6	4
Woodpulp .....	7	11
Molasses .....	13	24
Hides .....	51	8
Oil cake and meal .....	52	112
Tallow .....	474	2,581
Unmanufactured Wool .....	85	52
Wool fabric .....	23	1
Cottonseed .....	540	230
Cottonseed oil .....	1,720	7,178
Tung oil .....	9	17
Cotton waste .....	44	245
Cotton cloth .....	53	58
Cotton rags .....	43	55
Peanut oil .....	2,865	1,021
Canned meat .....	64	108
Butter .....	1,948	1,412
Cattle .....	485	229
Sheep and goat skins .....	51	28

In 1935 new records were made in the quantity of imports that compete with the American farmer, such as wheat, corn, tallow, peanut oil, cottonseed and cottonseed oil and butter. Cottonseed oil reached the stupendous increase of 7,178 percent over the 5 year average 1930-1934. During 1935 we imported 378,000 cattle, the largest since 1929 and imports of canned meats more than doubled the 1930-34 average. Foreign fats and oils were imported in increasingly large quantities during 1935, some recording all-time highs.

Not only are we buying more from abroad, but in wheat and some other commodities, including cotton, we have lost or are rapidly losing our foreign markets as the result of artificial measures to curtail output and raise domestic prices too far out of line with world prices.

# COMMUNISM

**C**OMMUNISM cannot any longer be viewed as a far off nightmare. Its apostles are too active here to be passed over as fanatics aiming at the moon. Their definite objective to overthrow the government of the United States, and by force if necessary, is being made plainer every day.

Personal, political and religious freedom, private ownership of property and savings are what they would do away with. It is all rather wearing on the patience of Americans who are sometimes prone to be too complacent. It would be ridiculous except for the sympathy shown by too many teachers in our schools and the effect upon our children, besides the appeal it is making to certain classes of workers.

It is time to recognize what the Communists, who have been given so much rope in America, mean to do. Recent labor disturbances in Ohio have brought to employers and employees alike, in certain instances in that state, the character of the efforts that are being made to upset industry and render it impossible for workmen to go about their daily tasks without fear of violence. Factories have been closed for days at a time and entry to offices barred to officials in charge who wanted access to their books and mail. Workmen have been threatened with destruction of their homes if they did not yield to the demands of radical agitators who, with rifles, conducted their operations from trenches. In one town it is reported the state highway was shut off and the passage of U. S. mail prevented. In fear, or from political motives, those in authority failed to intervene.

Agitators who went South to bring about a textile disturbance were treated differently in the Carolinas and Georgia. Law officers and courageous governors, acted promptly to rid their states of firebrands appearing behind the false front of aiding peaceful, law-abiding labor.

American business men who have been in Russia long enough to form competent opinion of what is taking place in that unfortunate country, say there are approximately 300,000 Communists. The balance of 165,000,000 people do not know what it is all about. The capitalistic plan of reward for individual effort, it is said, is being adopted among the favored, so that the insiders appear to have what others lack. This gives a reason, which the rest of the world has wondered about, of what might be the objective of Communism, if there is any objective except general confusion.

To the rest of us, it has been seemingly a desire to upset everybody with no practical accomplishment possible. It has appeared so vague as to leave the outcome to imagination. The excuse of lifting labor, but destroying all business, is so absurd from the standpoint of enduring results, as to make it impossible to grasp anything but the resulting disruption that would ensue without the gaining of any practical end.

If those in charge have loot and selfish advantage as their aim, that at least would be comprehensible. They have ridden rough-shod over opposition by terrorizing methods involving cruelty and bloodshed. Such condi-

tions in any country are bad enough, but they are an unwelcome foreign product to be introduced in America.

Unfortunately, our politicians have listened to these agitators in their ranting about the need of changing conditions here. They have accepted ideas of how America should go about changes, but the agitators offer nothing that has proven successful upon which to base their talk. They are ranters pure and simple. They are bent upon abolishment of individual ownership, and with that goes the destruction of individual initiative and the hope of any outlook for free enterprise.

They are not logical or intelligible, except that they want to do anything and everything destructive to the achievements which represent America.

## SKILLED WORKERS NEEDED

**A**S industrial activity increases, there is likewise an increasing shortage of skilled labor. Noticeable last fall in the machinery trade, a similar shortage has since developed in various lines of manufacture and in the building trades.

Various localities, applying for WPA money, found they could not undertake proposed work because there were not sufficient workers to perform tasks requiring experienced men. On other public projects on which work was under way, plans had to be revised more than once because of the shortage of skilled craftsmen.

The depression, curtailing as it did opportunities for general employment, naturally did not provide the incentive for training young workers that existed in normal times, but there has been no adequate provision for making apprenticeships possible on anything like a sufficient scale to meet future labor demands of the country. The embarrassment will grow with the country's requirements unless a way is found to supply skill where needed.

Mechanical and building industries, employing a large proportion of skilled labor, were hardest hit during the depression. Employment in machinery lines dropped in 1932 to less than one-half of the 1930 level. Men trained to do a skilled job drifted from necessity into other employment, and in the building trades there was a drop in employment figures from approximately 2,300,000 in 1929, to about 600,000 in 1933.

The education of more young people in our schools in technical and manual training lines, becomes of outstanding importance in this connection. It is frequently pointed out by employers, at a time when such a large part of the American tax dollar is being spent for education, that the plans of educators should include training young men in occupational craftsmanship. Many of our young people, without proper regard to adaptability or fitness, are taking college courses that apparently have very little relation to scientific pursuits, or to the growing need for capable men trained to work with their hands.

# THE SOUTH MARCHES ON

**I**n agriculture and manufacturing, the South continues its steady march of progress. Depressions affecting this country and the world temporarily retard the forward movement at times, but with each succeeding recovery, the South advances to higher levels of development.

Agriculture was the dominant activity in 1882, when the MANUFACTURERS RECORD began to emphasize the industrial opportunities of the Southern States which were just emerging from the destructive reconstruction period following the Civil War.

In 1880 the value of the South's agricultural output was \$756,903,000 and the annual production of manufactures was \$622,840,000, with coal and a few other minerals just beginning to be developed. At that time, the population of the South was 18,538,000. This has grown to 44,500,000, or a gain of 145 per cent, which is almost equal to the entire population of the United States in 1880.

Today, after six years of country-wide depression, the annual production of the South's farms, forests, mines, and manufactures has increased to over \$11,400,000,000.

With agriculture still a major activity, the total output being valued at \$3,225,000,000 in 1935, the South is producing 40 per cent of the country's total crop values.

While agricultural values have increased, the South is adding every year to its importance as a manufacturing region. The aggregate value of manufacturing in the South is now estimated at \$6,700,000,000 a year, and the products of its mines, oil and gas wells, and quarries are in excess of \$1,500,000,000 annually.

Lumber, naval stores, tobacco, and cotton once dominated the South's industrial picture. They continue of major importance, while later was developed textiles and tobacco manufacturing, iron and steel, copper, lead and zinc, furniture, kraft paper and box board; clay working, granite and marble, coal and other mining activities; the development of the automobile called on the South to produce and refine more and more of its petroleum products; then came the rayon industry and great chemical enterprises with by-product and allied industries rounding out a highly diversified manufacturing development.

Now the South is preparing to capture its share of the foreign pulp and white paper imports amounting to about \$170,000,000 a year. About \$50,000,000 have been invested in new pulp, paper and linerboard mills in the past two years. Tung oil, plastics and vegetable

fiber developments are beginning to assume greater importance in the South's industrial picture.

To the South's older establishments which utilize primary materials of its mines, forests and farms, are being added other plants supplementing existing products and creating new products and uses for agricultural and mineral resources. By-product plants, and servicing enterprises are helping to swell the total industrial output for world-wide distribution.

Northern and western interests are in increasing number seeking plant sites and opportunities for Southern investment. This is because of the more favorable climate and manufacturing advantages with American labor, nearness to raw materials, available power and transportation facilities.

The expansion of chemical and paper making activities in the South in the past two or three years with more than \$85,000,000 invested in new plants is significant.

It is beyond question that the trend of industry is increasingly toward the South. For the past nine months more than \$177,000,000 have been invested in new industrial plant construction and expansion here. This is \$40,000,000 more than the total value of the contracts let for such construction in the 12 months of 1935 and a 124 per cent gain over the years 1933 and 1934.

This construction and the attendant growth in manufacturing production has greatly broadened and enlarged the South's market for machinery, materials, fuel and power.

Since its establishment in 1882, the MANUFACTURERS RECORD has encouraged the development of the South's resources, the location of appropriate industries and the investment of capital in Southern enterprises.

As we view the future from an experience of 54 years, although not usually given to prophesy, we believe the path of the South's forward movement is clearly defined.

It will become the center of America's manufacturing in chemical and other lines.

It will continue, as it is now, the outstanding bulwark of Americanism in this country. This is so because of its tradition and the inherent character and blood lines of its people.

America's greatest progress will take place in the South, and future growth, much of it close at hand, will far surpass anything of the past.

The manufacturing plants of the South that are either the largest of their kind in this country or the world make an impressive list. We will be glad to send it to inquirers.

## *Among some of the major industrial activities of the country, the South is producing each year*

43 per cent of the lumber	41 per cent of the coal	83 per cent of the Fuller's earth
100 per cent of the naval stores	10 per cent of the iron ore	100 per cent of the barite
25 per cent of the furniture	100 per cent of the bauxite	55 per cent of the fluorspar
60 per cent of the kraft paper	50 per cent of the aluminum	60 per cent of the feldspar
67 per cent of the cotton goods	37 per cent of the lead	43 per cent of the clay
90 per cent of the tobacco products	99 per cent of the phosphate	23 per cent of the stone
65 per cent of the petroleum	99 per cent of the sulphur	40 per cent of the granite
70 per cent of the natural gas	34 per cent of the lime	62 per cent of the marble



# HOLDING THE SCALES IN EQUAL BALANCE

**W**HEN James Mitchell, a citizen of Massachusetts, came to Alabama 25 years ago to develop hydro power, he had just returned from the Orient. He found that human labor was employed in industry for as little as 2¢ per day, and concluded that many years would pass before power would save mankind in that part of the world from toil that it should be spared. So he chose to cast his lot in the South because he considered that the South was destined to grow as no other part of the Nation and that electric power would eventually replace human labor in its homes and industries. He and his friends purchased several undeveloped power sites and developed them without the expenditure of one dollar from the Federal treasury.

**I**T has been the fashion for some, who would force a new social doctrine upon the South, to tell us about our failures and deficiencies,—true patterns of those who would up-lift us by teaching us basket-weaving and other noble arts. They give little weight to the things that represent so much in every day living, such as the vast improvement in the public health and in the extension of school facilities, towards which the taxes paid by the private utilities have so largely contributed.

For anyone to have told us two decades ago how this improvement was to come about would have been impossible; it was not by any logical reasoning—rather by a large amount of common sense and a spirit of adventure, coupled with an unlimited confidence of the people in their section.

**T**HE Alabama Power Company is providing electric service to many diversified industries and individuals in 560 cities, towns, villages and community centers of the State, of which 465 are communities of less than 1,000 population. During recent years it has extended its service to more than 40,000 customers on farms and in rural communities. To accomplish this it has raised \$150,000,000 by the issue and sale of its bonds and stocks to the public.

Thousands of young men and women have found employment; new wealth has been created; the volume of taxes has greatly increased; society in general has benefited from a new order which so largely has its roots in the pioneer efforts of men who risked and dared in the building of hydro plants and new industries to convert the raw materials of the South into finished products. An interconnected power system exists and functions in the interest of the public over the area from Ohio to Mississippi,—com-

posed of many separate corporate entities, but interconnected to render better service in emergencies and to make greater use of the steam and hydro power resources of this vast area. The ingenuity, skill and daring of the ablest corps of engineers ever brought to a task, constructed and now operate this vast system so perfectly that the public scarcely realizes just what it means; unless by chance one happens to go to one of the central dispatching stations.

A foremost medical authority of our state recently said to me that one inherent cause of public health improvement has been the extension of electricity to the small communities and rural areas of the state, enabling a vast improvement in the living standards. Small appliances, refrigeration, cooking and water heating facilities have literally been brought within the range of thousands.

**F**ROM this arises the basic philosophy of the business: "to gather the streams from waste and to draw from them energy, labor without brains, and so to save mankind from toil that it can be spared, is to supply what, next to intellect, is the very foundation of all our achievements and all our welfare."<sup>1</sup>

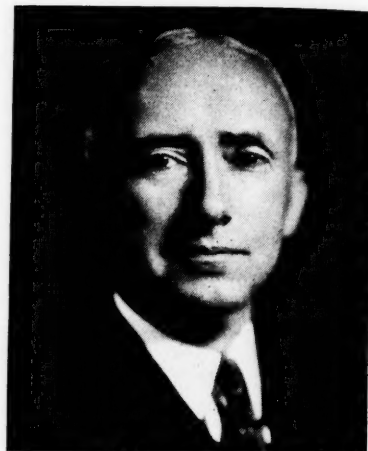
Beginning as early as 1920, promotional rates were made available for residential customers of Alabama Power Company having electric ranges. With the development of the electric water heater and refrigerator, the Company during 1927 to 1929 introduced promotional rates applicable to all residential, commercial and rural customers, being one of the first companies in the nation to establish such practice.

Modifications in the rate structures were made from time to time; the objective rate plan was here formulated and first put into effect,—since adopted by utility companies in many parts of the country; and the residential rates of the

<sup>1</sup>Justice Holmes; 240 U. S. 30 (1915)

By

**Thomas W. Martin,**  
President, Alabama Power Company



Company steadily declined and consumption increased as shown by the following table:

Average Annual Kwh per Consumer Alabama Power		
Year	Company	Nation
1928	496	463
1932	798	601
1936	1063	688

Average Rate per Kwh Alabama Power		
Year	Company	Nation
1928	7.28	6.63
1932	4.79	5.58
1936	3.40	4.93

To be more specific, that Company's uniform residential rate is in effect in 560 localities, scattered over an area of 40,000 square miles; and the June consumption in these localities, of which 465 have less than 1,000 population was at the average rate of 93 Kwh per consumer or 1116 per annum; the rate for that month being at the lowest thus far attained of 3.11 cents per Kwh.

Statistical Bulletin No. VIII of TVA, issued in May, 1936, states that the twelve months average domestic use per customer in the 7 cities and cooperatives it supplies was 1,110 kilowatt hours per customer. The average population of the 7 cities supplied by the TVA was approximately 3,300. One may well ask whether this record of TVA in a few small operations compares favorably with that of the private utility in its entire statewide system.

**T**HE TVA for three years has carried on a program that engenders in the minds of people a spirit

of distrust and hatred for private enterprise in the power business.

It is a commentary on the soundness and the vitality of the industry that during this period the use of electricity has increased and with corresponding reductions in rates.

It is stated by TVA propagandists that the wholesale rate which the Authority charges cities and associations served by it varies but little, perhaps a mill or two per kilowatt hour, from the wholesale rates generally charged by the private utilities in the same territory. Tupelo and Athens owned their electric plants long prior to the coming of TVA. Their rates were invariably higher than those of the private utilities. Indeed, rates for electricity charged by private companies in Alabama are lower, much lower, than rates charged by municipalities operating electric plants in the State, according to a report recently issued by the Federal Power Commission in which comparisons are made between private and publicly owned electric companies all over the United States.

It is stated that the TVA resale rates are intended to cover all legitimate costs of service, and that in practice it has been found that they do cover them. The TVA, having to do only with generation and transmission and not with local distribution of power, nevertheless furnishes extensive and costly accounting, engineering and sales promotion, and other services, to the municipalities without charge to them.

The position is usually taken by TVA advocates that privately owned utilities within the sphere of influence of the TVA

have in the past been immune from competition, lack initiative and enterprise in broadening their markets and that TVA, in setting itself up in competition, has justified itself.

**PUBLIC utilities in the Southeast have for years furnished electric service in competition with energy produced by coal, natural gas and oil. There has never been a time since large scale-development of power began that the utilities have not met competition, and if the management of the private utilities had been lacking in initiative, we would not now have the great development which is evidenced on every hand by the thousands of miles of transmission lines and distributing systems throughout the Southeast. The utilities do not object to competition; it is unfair competition-from-the-Government to which they object.**

Why is it unfair? Because the Government, though engaging in private com-

#### Jordan Dam

This hydro-electric development of the Alabama Power Company was completed January 1, 1929, on the Coosa River about 18 miles below Mitchell Dam and 20 miles above Montgomery. The plant's generating equipment consists of 4-36,000 horsepower turbines and 4-29,000 kilovolt-ampere generators with present capacity of 144,000 horsepower and ultimate capacity of 180,000 horsepower. The dam creates a navigable slack water pool extending to Mitchell Dam which, combined with the pools formed by Mitchell Dam and Lay Dam, makes navigable a total of 56 miles of the Coosa River in which the natural fall is 233 feet. Contains provision for 2 locks.

petitive business, declines to pay taxes that private business must pay, and never takes account of the interest which it must pay upon the money borrowed from the public for the construction of plants and systems and permits the operators of such plants to take advantage of the many immunities commonly attached to the sovereign.

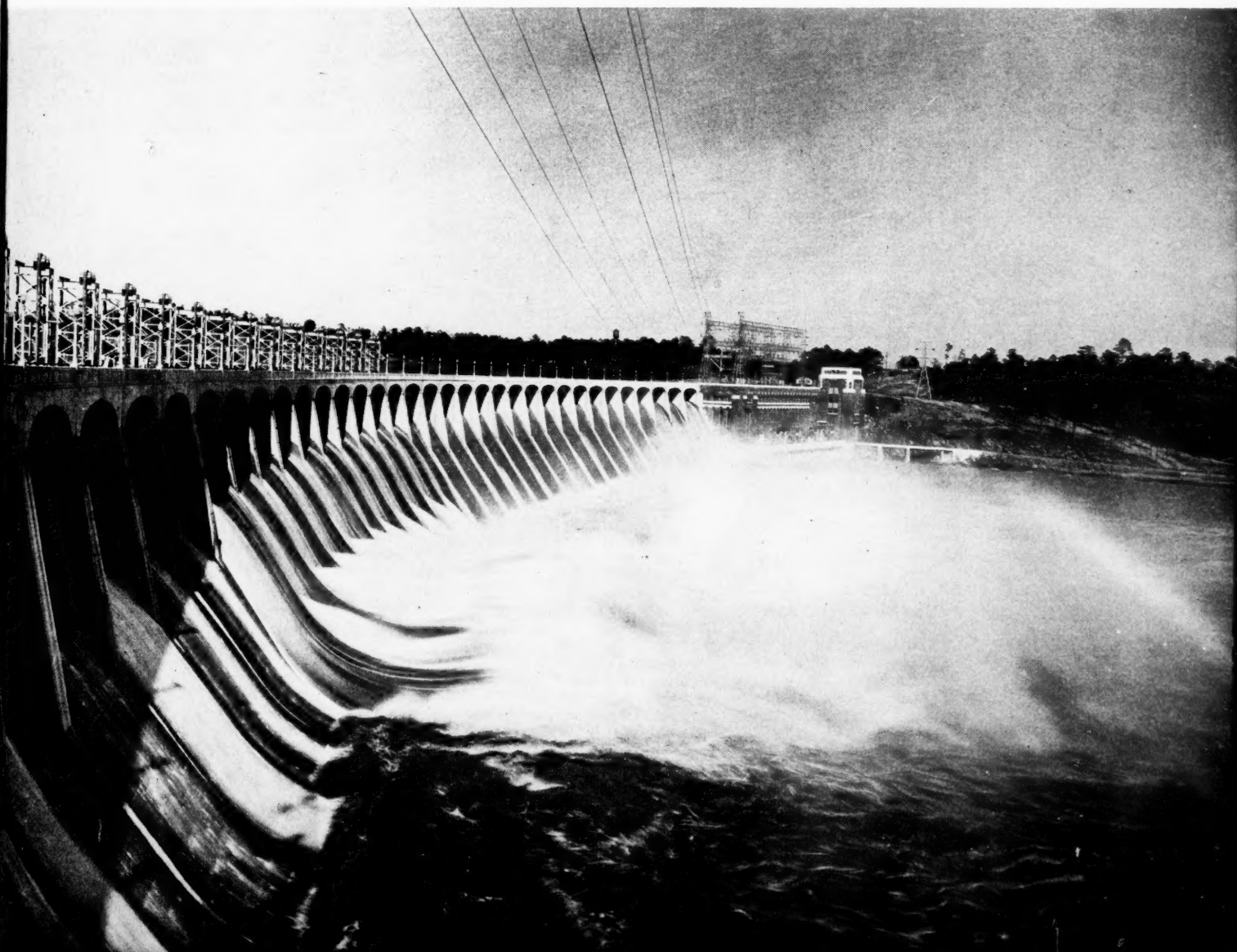
Nor do the Government-owned systems set up sufficient reserves for retirement of property and kindred purposes. At present the Alabama Power Company is setting up reserves at the annual rate of \$1,830,000, compared with \$82,618.48 set up by TVA in 1934; and its last report to Congress shows no reserves whatever.

Comptroller McCarl, in his first report on the TVA, said that:

"Such reserve (\$82,618.48) appears to be entirely inadequate. The properties in question are depreciating in value and if the return from operation is to be properly determined, the reasonable value of all things consumed, including depreciation of original investment, must be taken into consideration."

He also pointed out that the properties turned over to the Tennessee Valley Authority cost the Government \$133,000,000,—since increased by appropriations to over \$380,000,000.

**T**HE writer recalls with what pride the copper plate on one of the large power houses of Alabama





Power Company on the Coosa River, completed in 1914, was unveiled. It contained the statement that it was

"The initial development in Alabama combining River Improvement with Power Development."

**That and three other major developments costing over \$50,000,000 were built under Federal license; they are incidentally aids to navigation and without cost to the Federal taxpayer. The total cost was borne entirely by that company, and is reflected in its rate base and tax base.**

ON the other hand, the TVA is directed by the law creating it to charge its capital costs to five elements,—flood control, navigation, fertilizer, national defense and the development of power. Thus it is in position to charge off to purposes other than power development the larger part of its capital investment. For instance, it has written down the value of Wilson Dam from \$47,000,000, its cost, to \$19,200,000; the 60,000 kilowatt steam plant at Muscle Shoals from \$12,000,000, its cost, to \$1,900,000; and its public statements, both before congressional committees and in the newspapers indicate that in the future TVA will charge to its power operations an insignificant part of the total cost. When this is done, we predict that the cost of its dams and reservoir lands will be omitted entirely.

The Tennessee Valley Authority also declines to comply with State laws regulating public utilities. It has long been recognized that competition in the same area between utilities was uneconomic, unsound and harmful to the public interest; and in the most progressive states, including Alabama, legislatures have enacted laws requiring utilities to secure certificates of convenience and necessity before going forward with extensions of plants, lines and other facilities, the purpose being to prevent duplication of facilities.

TVA has from the first denied that public service commissions in the area in which it operates had any jurisdiction to prevent it from invading the markets already served by existing facilities, and it has invaded territory already adequately served and announces that it will continue such invasions.

WHAT the private utilities object to is not competition with the various sources of energy, nor with others not enjoying gifts from the Federal Treasury, but to this type of competition from the government. If the Government wishes to establish a yardstick,—the purpose for which TVA was set up,—and will not give to that agency the subsidies mentioned, the private utilities will meet that competition without a murmur. The complaint of the private utilities now is that having established and built up growing businesses and markets, the Tennessee Valley Authority is raiding their markets. The TVA, like the Cuckoo bird, has not built its own nest; it is seizing the nest of another bird.

Typical of this attitude, the TVA recently began the construction of lines parallel and contiguous to the private power company's lines in an Alabama county. The company assumed the lines were being constructed by TVA on behalf of the county cooperative, called a membership corporation, and filed a suit to

restrain the cooperative from constructing and operating such lines, as no certificate of convenience and necessity had been applied for or issued by the Alabama Public Service Commission. At the time of the filing of this suit the writer in a public statement said:

"The methods of TVA against this company smack of the old days of the tooth and claw. Working under the cloak of the county cooperative, the agents of TVA have gone to areas now being served and in which we are actually surveying and constructing new lines, and have by unfair methods dissuaded prospective customers from taking our service. These activities are neither right in morals nor in law."

At the hearing July 24, 1936, for an injunction, all the directors and the officers of the membership corporation appeared and denied under oath that the rural lines being constructed by TVA were being constructed for the membership corporation; and insisted that no one had been authorized by them to dissuade any of the company's present customers from continuing to take their electric requirements from the company.

Thus the TVA does not even have the cloak of the county cooperative to shield it in its destructive, competitive warfare.

The writer of an article in July *Harper's*<sup>2</sup> stated that to date any competition which has existed between TVA and private power companies has been a competition of ideas and policies only. It so happens that the writer of the *Harper's* article spoke before a meeting of Cullman County Cooperative Association, on May 6, 1936, following which the competitive destruction above mentioned was begun by TVA.

Any business enterprise would welcome competition of ideas and policies; no company or agency can remain static; other individuals in the same or different lines of business may make helpful suggestions, but that is not what we are talking about. We are talking about a competitor who takes his entire capital outlay from the Federal Government and who pays neither interest nor taxes.

AGAIN in north Georgia the TVA within recent weeks and prior to the publication of the article in July *Harper's*,<sup>2</sup> erected a number of lines competitive directly with those of the Georgia Power Company; and their agents talked with the Georgia Power customers and endeavored to persuade them to leave the Georgia Company's lines.

It is true that power requirements in the Southeast have been on the increase and that some of the surplus capacity is being absorbed. This was to be expected. Government ownership advocates point to it with satisfaction. The tragedy is that the larger Southern companies that had good credit and ready markets for their securities are now unable to sell them. If they are to continue to function and to serve in an adequate manner, they must have large amounts of new capital for plants, lines, services, etc., and the ability of these companies to raise capital funds depends on the outlook for earnings over a long period. There are no buyers of their securities, for actual and threatened Government competition

<sup>2</sup>Teaching Grandmother How to Spin.—William I. Nichols, Director of Electrical Development, Tennessee Valley Authority.

has them frightened. Of course, to TVA, which obtains its entire capital from the Federal Treasury (hence from the taxpayers), and which pays no interest on the funds it spends, the matter of earning a return sufficient to attract capital is of no concern.

It is no answer to say that certain companies, including Alabama Power, are enjoying good business because of increased domestic consumption. Desirable as it is from a social viewpoint to increase domestic consumption, that alone has little bearing on the ability of the Alabama Company to raise new capital. The best business enjoyed by that company in its history was in 1929. For 1935, the net after interest and preferred dividends was only 18 per cent of the 1929 net. For the present year the earnings are a little better than for 1935, but our company is absorbing 21 different kinds of taxes, many of which are new and some of which are laid upon the private utilities in recent years as a part of the crusade for public ownership.

MANY utilities are refinancing their senior obligations at low rates of interest<sup>3</sup>; but threat of government competition in this area makes it impossible for the Alabama Power and other companies to refinance. It follows then that the consumer pays in his power rate for this government hazard.

The statement that the Alabama Company has benefited by the TVA activities will be surprising news to holders of its preferred stock and bonds since their securities are selling at a discount of as much as 40 per cent below par in the market where similar securities of operating utility companies removed from the zone of TVA activities are selling at a premium.

SOME electric consumers are securing subsidized rates, but the vast majority cannot hope to do so unless the industry is entirely taken over and subsidized from the public treasury. As for those not in the area, it has been properly said that every time a householder of Tupelo, Miss., turns on his electric light every tax payer in the United States gets a shock to his pocketbook; but the electric consumer of the Alabama Power Company suffers a second shock, for in his electric rate he pays a cost of money which includes as one necessary element,—the hazard of Governmental competition.

On the other hand, it is pointed out that the private companies in Tennessee, Georgia, and Alabama have done an excellent job as compared with companies in other parts of the nation; but anyone coming here for a study of the electric situation five years ago or even before that time would have reached the same conclusion. And if so fine a job is being done, the citizens of this section who are interested in its further growth and development wonder just why the apparent contradiction in TVA publicity.

"Why," the citizen says, "should the companies that have done the best job be subjected to fierce Government competition? Why does not the Government agency cease its efforts in behalf of public ownership and recommend to

<sup>3</sup>One of the companies in the holding company group with Alabama Power Company recently sold 3¼% bonds and 4½% preferred, which are now selling at a premium. If Alabama Power could refinance its bonds and preferred on this basis, it would save approximately \$2,000,000 per annum.



the people of the section that they purchase their requirements from the distributing companies which are praised for their selling job?"

But this praise is more apparent than real; for it is only given as a basis for claiming results with which it had nothing to do.

**W**HETHER TVA is really interested in aiding the utilities, or whether it is actually seeking to destroy them is before the investor constantly. Is the program of the TVA really one of destruction of investment: is it one of seizing the markets and the customers of the utilities, and, under threat of duplicating their properties, acquiring them for itself and for other public agencies? One of the first important announcements of TVA with reference to its program was that of August 25, 1933, concerning its policy, in which it undertook to define the initial area it proposed to seize as its market. That announcement said:

"To provide workable and economic basis of operation, the Authority plans initially to serve certain regions and to develop its program in those areas before going outside."

The initial areas selected by the Authority may be roughly described as:

"(a) The region immediately proximate to the route of the transmission line soon to be constructed by the Authority between Muscle Shoals and the site of Norris Dam.

"(b) The region in proximity to Muscle Shoals, including northern Alabama and north-eastern Mississippi.

"(c) The region in the proximity of Norris Dam (the new source of power to be constructed by the Authority on the Clinch River in Northeast Tennessee).

"At a later stage in the development it is contemplated to include roughly the drain-

age area of the Tennessee River in Kentucky, Alabama, Georgia and North Carolina, and that part of Tennessee which lies east of the west margin of the Tennessee drainage area.

"To make the area a workable one and a fair measure of public ownership, it should include several cities of substantial size, (such as Chattanooga and Knoxville), and ultimately, at least one city of more than a quarter million, within transmission distance, such as Birmingham, Memphis, Atlanta or Louisville.

"While it is the Authority's present intention to develop its power program in the above-described territory before considering going outside, the Authority may go outside the area if there are substantial changes in general conditions, facts, or governmental policy."

"Nothing in the procedure here adopted is to be construed in any sense a commitment against extending the Authority's power operations outside the area selected . . . where special considerations exist . . . the Authority will receive and consider applications based on such special considerations. . . ."

**S**INCE the above announcement was made, TVA has requested of Congress authority to go forward with a number of additional dams on the Tennessee River and its tributaries; to proceed with a program of

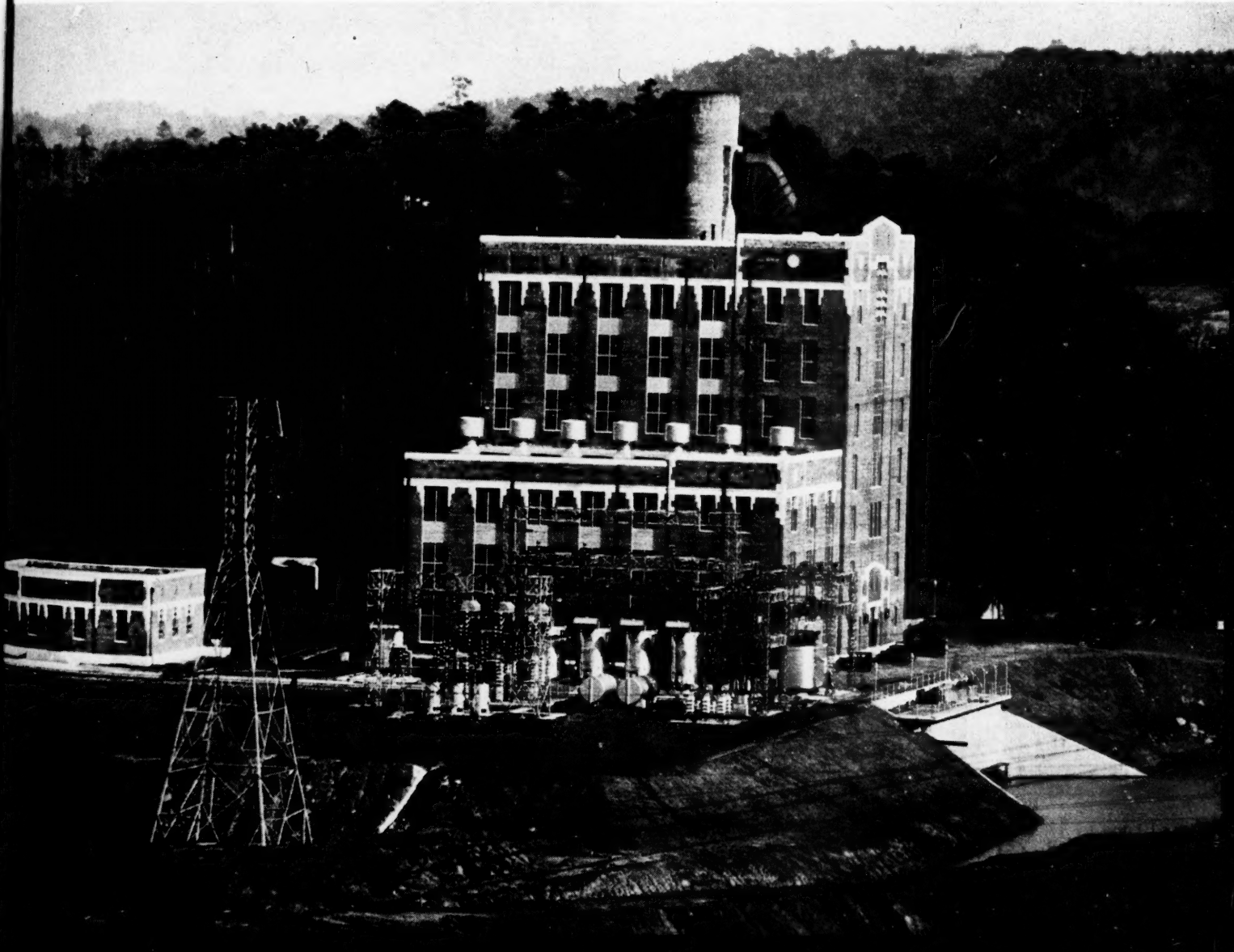
#### One Unit Gorgas Steam Plant

Four units of the Gorgas steam power development of the Alabama Power Company were completed several years ago on the Black Warrior River in the heart of the Warrior coal field, 25 miles northwest of Birmingham. Their combined equipment consists of 4 turbines with a total of 180,000 horsepower and 4 generators with total of 150,000 kilovolt-amperes. Their present capacity is 80,000 horsepower and ultimate capacity is 320,000 horsepower.

dam construction that will produce 25 billion kilowatt hours annually; that will include dams in North Carolina on the east and at the Gilbertsville site on the lower Tennessee River, near its mouth, which will enable it to extend its domain to include parts or all of fourteen states. That area will include Bloomington, Ill., and Indianapolis, Ind., on the north, and will reach to the southwestern corner of Alabama on the south; it will extend from Greensboro, N. C., and Columbia, S. C., on the east, to Jefferson City, Mo., and Little Rock, Ark., on the west. It will include such cities as Birmingham, Memphis, Knoxville, Montgomery, Atlanta, Nashville, Cincinnati, and St. Louis. As stated, the program of dam construction will produce 25 billion kilowatt hours annually. The consumption of electricity in the area within 250 miles of the generating plants to be constructed under the TVA plan is approximately 14 billion kilowatt hours.

*To market such a vast quantity of power will, of necessity, require the seizure of the markets and customers of the utilities operating within that area. Is it fair or honest for the Federal Government to tax the utilities, and at the same time seize their business? Is it fair for the Government, in view of its encouragement in the past of thrift and enterprise, now to come forward and confiscate the businesses that have been built up over a long period of years?*

**T**HE idea behind the TVA was that it would establish a yardstick for electric rates. The ideal of the yardstick was set forth by Arthur E. (Continued on page 66)



# SOCIAL SECURITY ACT—

## Its Effect Upon the Bituminous Mining Industry

By

J. D. Battle

Executive Secretary,  
National Coal Association,  
Washington, D. C.

Will Tax the Coal Industry Over \$20,000,000 Annually in Next Two  
Years and About Double That Amount by 1946. Production  
Costs Increased by \$1 a Ton

**T**HE bituminous coal mining industry in a normal year employs 500,000 men. Wages to labor constitute more than 60 per cent of the total cost of mining and loading bituminous coal. For that reason this industry is even more concerned with the provisions of the Social Security Act and the tax burden imposed by it than are most other industries.

The Act, which covers both unemployment compensation and old age benefits imposes a payroll tax on employers of eight or more persons and their employees. The taxes are levied on the amount of the payroll, eliminating, in the case of the old age pension part, amounts paid single employees in excess of \$3,000 in any one year. Under the two titles the total tax to be paid by an employer of eight or more persons will be the percentage of his taxable payroll shown in the accompanying table.

Year	Paid by All Em- ployers %	Paid by Employers of 8 or More Persons %	Total %
1936 .....	—	1	1
1937 .....	1	2	3
1938-1939 .....	1	3	4
1940-1942 .....	1½	3	4½
1943-1945 .....	2	3	5
1946-1948 .....	2½	3	5½
1949 and later ..	3	3	6

There are various ways in which the significance of this tax to a bituminous mine operator may be brought out. In the following table the second column shows the total amount of annual tax per \$100,000 of taxable pay-roll, payable by operators employing eight or more persons. The third column shows the tax per ton of coal at an approximate average labor cost of \$1.30 per ton. The fourth column makes the burden of the tax more obvious by showing what the operator must pay for the privilege of employing a \$25-a-week clerk.

Year	Tax Per \$100,000 Taxable Payrolls	Tax Per Ton Labor Cost \$1.30	Tax Per \$25 a Clerk Week
1936 .....	\$1,000	\$0.013	\$13.00
1937 .....	3,000	.039	39.00
1938-1939 .....	4,000	.052	52.00
1940-1942 .....	4,500	.0585	58.50
1943-1945 .....	5,000	.065	65.00
1946-1948 .....	5,500	.0715	71.50
1949 and later .....	6,000	.078	78.00

Even these impressive figures do not

fully bring out the cost to society of the old age benefit plan. Besides the tax imposed upon employers under title 8 of the Act, "taxes with respect to employment," a 3 per cent tax will be imposed upon the wages of the employee. In other words, the employer and employee will, by 1949, be paying a total tax of 9 per cent. This tax is to be deducted by the employer from the pay envelope of the employee and by him turned over to the Federal tax collector. The employer therefore is an assistant tax collector.

### Federal Grants to States

The Social Security Act applies to a number of dependent classes. For all groups except the aged, Federal assistance takes the form of grants to States. The administration of the funds is left in the hands of State authorities, with the provision that the plan under which the State operates must have been approved by the appropriate Federal agency, the Social Security Board, the chief of the Children's Bureau, or the Surgeon General of the Public Health Service. This is the situation with respect to unemployment benefits, the care of dependent children, maternal and child health service, the care of crippled children, the promotion of child welfare, vocational rehabilitation, care of the blind, and the promotion of public health, as well as old age assistance to be rendered only to aged needy individuals. The total amount provided for grants to States for these various purposes for the year ended June 30, 1936, amounted to nearly \$100,000,000, and in the case of some of the grants, much larger appropriations were contemplated for later years.

The amounts involved in the case of any of the benefits except those to the unemployed and the aged are relatively small and relatively simple in administration, so that no special comment upon them is necessary. The situation is very different with respect to Federal old age benefits and unemployment insurance.

The administration of unemployment insurance is placed in the hands of State agencies; but the plans under which they work must be approved by a Federal So-

cial Security Board created by the Act. While in times of normal industrial activity unemployment varies relatively little from year to year and the reserves necessary for unemployment compensation payments can be fairly definitely estimated, during major depressions the demand upon the compensation fund becomes exceedingly great. Under the Social Security Act only those States whose financial plans are approved by the Board share in the Federal contribution, and those States must deposit all money received in their unemployment funds in the unemployment trust fund established in the Treasury of the United States. Each year the Treasurer turns over to the State administrative agency such amount as the Social Security Board certifies to the Secretary of the Treasury to be necessary for the proper administration of the State law during that year. Of the amounts so certified for payment to any State only as much can be taken out of the unemployment trust fund as the State has contributed to that fund. Any additional amount must come out of other monies in the Treasury.

The Act imposes a tax on employers of eight or more. Since those who pay this tax are permitted to deduct contributions to State unemployment funds up to 90 per cent of the tax assessed against them, it is evident that this tax is regarded as the source from which Federal contributions are to be paid. However, it is to be noted that there is no provision in the Act for segregating the proceeds of this tax or in any way limiting the contributions of the Federal Government to State unemployment funds to the amount received from this tax. The proceeds from this tax are to "be paid into the Treasury of the United States as Internal Revenue collections."

The amounts of Federal contributions to such State funds are defined as "such amounts as the Board deems to be necessary for the proper administration of such law during the fiscal year in which such payment is to be made." The effect of these provisions is apparently to put upon the Federal Government the burden of providing for all abnormally large demands in the nature of unemployment compensation, and how large such demands may become can be judged from the unemployment experience of the country during the last five years.

### Old Age Benefits

Federal old age benefits constitute the only phase of the Social Security program which is entirely under the administration of the Federal Government. The benefits payable to any qualified individual under this plan begin when he

(Continued on page 76)



ry

wo

Act.  
tiv-  
ttle  
ces-  
ion  
sti-  
de-  
be-  
So-  
ose  
ard  
nd  
re-  
in  
ed  
es.  
he  
nt  
to  
ec-  
of  
he  
y  
of  
te  
li-  
er

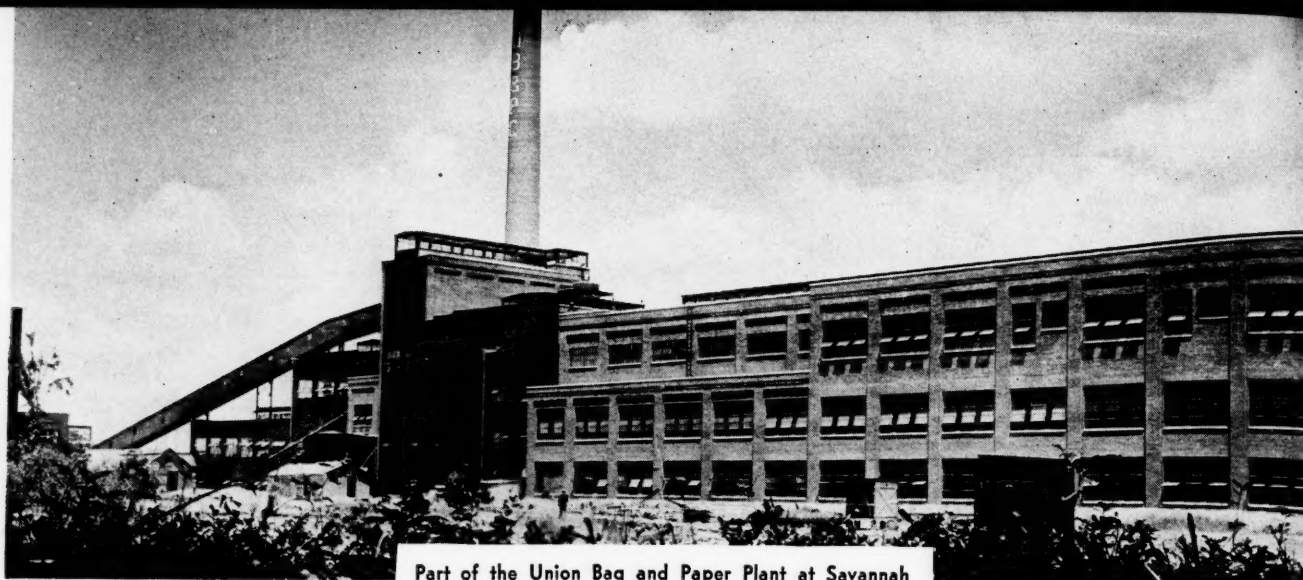
of  
is  
as  
00  
st  
a-  
l-  
y-  
o  
e  
r-  
s  
e  
1  
s  
n  
t  
e



# NEW INDUSTRIAL HORIZONS

South Invests \$50,000,000 in Pulp and Paper Plants





Part of the Union Bag and Paper Plant at Savannah

## SOUTHERN PAPER DEVELOPMENT MAKES RAPID PROGRESS

**T**HE Civic Celebration dedicating the new \$4,500,000 kraft paper and bag plant of the Union Bag and Paper Corporation at Savannah, Ga., October 1, marked the opening of the first of the new group of gigantic paper mills being established in the South. Before the mill was in full operation, a \$2,750,000 addition was started. Construction details have been described in previous issues of the MANUFACTURERS RECORD. Altogether there are more than seven great kraft pulp, paper and linerboard mills under way or in prospect in the Southern States which involve an aggregate investment of approximately \$50,000,000. The latest one, announced last week to cost approximately \$7,000,000, is to be established at Brunswick, Ga., by the Brunswick Pulp and Paper Company, a corporation organized by the Mead Corporation of Chillicothe, O., for the manufacture of both bleached and unbleached kraft pulp.

By the first of the year, it is expected the \$4,000,000 kraft pulp, board and paper plant at Crossett, Ark., for the Crossett Lumber Co., will be in operation. Work is in progress on the \$3,500,000 paper mill at Houston, Texas, for the Champion Paper & Fibre Co.; the \$5,000,000 paper and kraft linerboard mill at Charleston, S. C., for the West Virginia

Pulp & Paper Co., and the \$7,500,000 kraft linerboard plant at Port St. Joe, Fla., for the St. Joe Paper Co. The proposed \$5,000,000 paper mill at Fernandina, Fla., for the Container Corporation of America, and probably others will be built in the South soon will materially add to the kraft paper and linerboard making capacity of this section.

These plants are the forerunners of the coming development in the making of white paper from pine in the South to free the United States from dependence on foreign pulp and paper now being imported at a cost of about \$170,000,000 annually.

### Crossett Kraft Mill to be Ready for Operation Soon

**W**ORK on the new 150-ton kraft pulp and paper mill, estimated to cost \$4,000,000, for the Crossett Lumber Co., at Crossett, Ark., is now being rapidly pushed to completion by the contractors, The Rust Engineering Co., Pittsburgh. During the next four weeks it is expected that all buildings will be closed in and machinery installed with the view to starting operations about the first of the year.

The new paper plant is located adjacent to the sawmills, lumber yards and chemical plant of the Crossett Lumber Co., which controls a vast acreage of timber and are leaders in forest conservation, thus insuring an ample supply of pulpwood for the mill.

Progress view of the Kraft Pulp and Paper Mill at Crossett, Ark., taken from the diffuser room toward the paper machine room, illustrating the type of construction which prevails throughout the plant. During the next month it is expected all buildings will be closed in and erection of machinery is proceeding rapidly with a view to starting operations about the first of the year.



In general all buildings are of steel frame construction, concrete floors, brick walls and wood roofs. The main group of buildings consisting of the diffuser and digester room, the beater and screen room, the paper machine room and the finishing room are connected. A separate group of the boiler and recovery plant, evaporator room and switch room form another unit, besides which there will be a separate unit of a wood preparing room, causticizing plant and salt cake storage building. A reinforced reservoir for fresh water storage and a tank of 100,000 gallon capacity with complete sprinkler system will be provided. A laboratory building and an office building complete the layout.



Construction Details of Champion Kraft Mill at Houston

### \$3,500,000 Paper Mill at Houston Is Well Under Way

**R**APID progress is being made in the construction of the \$3,500,000 bleached kraft paper mill for the Champion Paper & Fibre Co. at Houston, Texas, recently described by the MANUFACTURERS RECORD. Completion of the plant is scheduled for next January or February. General contractor is the Morton C. Tuttle Company, Boston, Mass. J. E. Sirrine & Company, Greenville, S. C., are the engineers.

To have a daily capacity of 300,000 pounds of bleached kraft, the plant represents a modernization of the process, which for the past 15 years has been in course of development at the company's Canton, N. C., mill, where a \$1,500,000 expansion program was undertaken several years ago.

The Houston mill is to be self-contained, producing chlorine and caustic soda. Lime will be made from local raw materials. Pine wood to form the chief raw material will come from the "Piney Woods" section of Texas and will be delivered by truck, rail and barge. A daily minimum of 10,000 cords will be consumed, and about 20,000,000 cubic feet of gas and 40,000,000 gallons of water are required for daily operation.

### Charleston Liner Board Plant is Started

**F**OUNDATION work is under way on the first unit of the \$5,000,000 pulp and paper mill at Charleston, S. C. for the West Virginia Pulp and Paper Company, long one of the largest paper makers of the South.

With eventual production of 500 to 600 tons of pulp, paper and board per day, the first unit of 300 tons will manufacture kraft test linerboard to make boxes and cartons. Including the production of wood which will be largely developed in the local districts, the plant should provide employment for about 1,000 persons. General contractor is the Morton C. Tuttle Company, Boston, and it is expected the plant will be in operation by July 1, 1937.

A water supply of from 25,000,000 to 35,000,000 gallons per day will be brought from the Edisto River about 22 miles from the Municipal water plant through a tunnel 7 feet in diameter, dug in marl. From the Municipal water plant, the water will be carried to the mill through a 48-inch reinforced concrete pipeline.

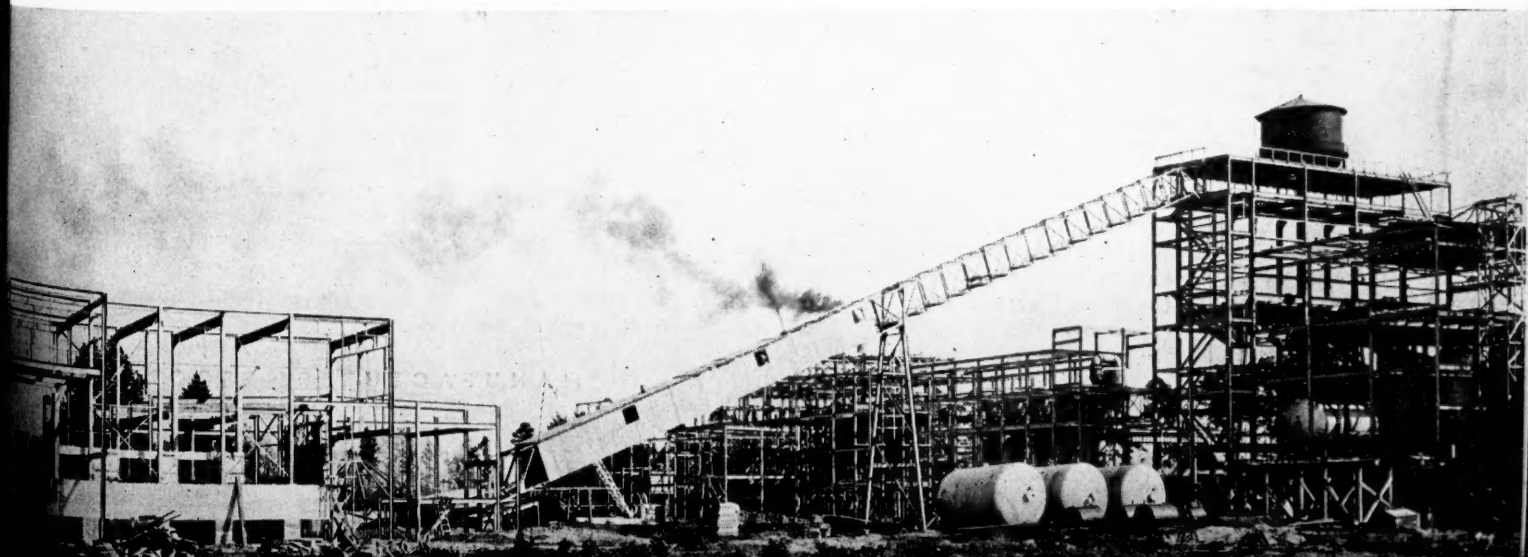
The plant is being built on about 17,000 piles driven by the Tidewater Company, Norfolk. The buildings will be of protected corrugated metal supplied by the H. H. Robertson Company, New York, and glazed tile. Structural steel is being supplied by the Virginia Bridge Company, Roanoke.

Since the plant is designed to be complete and self contained, steam and power will be produced by the Company. Steam generating equipment of 500,000 to 600,000 pounds per hour capacity is supplied by the Riley Stoker Co., Worcester, Mass.; Babcock and Wilcox Co., New York, and the Combustion Engineering Co., New York. Electric power equipment is supplied by the Westinghouse and General Electric companies.

### Port St. Joe Mill Project Under Way

**P**REPARATIONS have been under way for the \$7,500,000 mill at Port St. Joe, Fla., which the du Pont Estate had been active in developing. Its construction will afford another market for Southern pine. This project, like the rest of the new group of mills, will be devoted to the kraft industry. They mark a new era in the greater utilization of pine in the South.

Steel structures of the Kraft, Pulp and Paper Mill at Crossett, Ark., for the wood room, the chip conveyor, diffuser and digester, with six of the 12 diffusers in place and two of the four digesters erected. Beyond this group of buildings can be seen the 100,000 gallon storage tank, the boiler and recovery plant, evaporator building, switchroom and causticizing plant.





# RAIL FREIGHT RATE EQUALITY SOUGHT BY SOUTH

**P**RODUCERS charge rail freight rate discrimination against the South is unjustly maintained. No one denies the class freight rate level is higher, but there has been much "buck passing" as to why this situation still exists after years of effort on the part of Southern producers, and in some cases of Southern railroad cooperation, to bring about an equality of rail freight rates with other regions. Southern carriers have not been able in all instances to get what they and the Southern shippers want in negotiations with connecting lines for rates which will enable Southern producers to market, under a more equitable freight rate structure, a share of their products in the territory north of the Ohio and Potomac Rivers.

**T**HE question has been before the Interstate Commerce Commission many times. On this point the Commission explained some time ago that:

"We have made exhaustive investigations into the level of the class rates in official (Northern) and in Southern territories, as a result whereof we have prescribed levels of class rates within Southern territory and inter-territorially, the basic scale of which is approximately 39 per cent higher for equal distances than the basic distance scale of class rates prescribed for certain hauls in Northern territory."

**O**F 17 members of the Interstate Commerce Commission, only two are from the South, yet the South has over 35 per cent of the railroad mileage of the United States and in many basic industries the South is producing the bulk of the nation's consumption. Thus, an equalizing of the freight rate structure would be of material benefit to consumers in the South and outside of the South.

**T**HE reason it costs more to ship commodities out of the South than it does to ship them into this section, mileage and points of origin and destination the same, goes back to a freight rate structure based on population and traffic density established many years ago before the South expanded its manufacturing facilities. How to bring about an equality of rail rates between geographical regions so that Southern shippers will not be penalized is the problem to be solved without unduly reducing the earning power of the railroads.

**F**OR many years the lower production costs, lower wages and living costs, gave the Southern producer such an advantage over Northern producers that the higher freight rates applying to shipments within the South and those going

outside of the South were not felt so keenly. Under the NRA which raised wages and costs in the South, practically wiping out an economically sound favorable differential, Southern manufacturers began to feel the pinch of an arbitrary freight rate structure that was preventing fair competition in the nation's markets.

A survey of 668 Southern manufacturers by the Southern States Industrial Council showed the average hourly wage has been advanced 30.4 per cent in the South since 1935, as compared with a reported increase of 14.7 per cent in the North. The average wage per hour in the South last February was 41.2 cents as compared with an average of 31.6 cents in 1933.

**T**HE great handicap now resting upon Southern industry is its inability to obtain rates on articles manufactured in the South for shipment to other territories, particularly the North, on a basis competitive with the rates enjoyed by Northern manufacturers. The Southern shippers believe that the solution of this problem is a reduction in the class freight rate level in the South.

**S**PEAKING on "What Industry Means to the South" before a recent meeting of the Birmingham Traffic & Transportation Club, W. D. Moore, president of the American Cast Iron Pipe Company, pointed out some freight rate penalties on the South. In part he said:

"The cost of transportation handicap on account of distance is bad enough, if that were the whole story, but as a matter of fact, with very few exceptions, the cost of transportation, mile for mile and ton for ton, within the South and from the South into other sections of the country is approximately 25 per cent higher than is the case in the North and East."

It was brought out that there is a penalty of 18 per cent on textiles out of the

## Southern Producers Declare Higher Regional Class Freight Rate Prevents Fair Competition in Nation's Markets

South into the North over Eastern shippers of the same material; a penalty on stoves, ranges, hollowware, etc., of 25 per cent; building stone 9 to 25 per cent, and glassware 25 per cent.

Referring specifically to the Southern pipe producers, Mr. Moore shows that they have a transportation cost handicap of 85 per cent of all shipments as follows:

Regions	Per Ton
Pacific Coast Area .....	\$2.10
Intermountain Area .....	7.00
Great Lakes Area .....	4.50
Eastern Area .....	10.00

The \$10 per ton handicap, Mr. Moore declared, is prohibitive.

As the South produces nearly 600,000 tons of cast iron pressure pipe, approximately 60 per cent of all produced in the United States, it requires 6,000,000 tons of raw material and finished products involving transportation of coal, iron ore, pig iron, limestone, coke, sand, and the finished pipe. To produce the South's 600,000 tons of pipe gives employment to 25,000 Southern workers who receive about \$25,000,000 annually in wages. It is reasonable to assume that such industries are vitally important to the railroads, the farmer, the merchant, the worker, the community and the South.

**T**HE Federal Court of the Northern District of Illinois recently denied a petition by 20 Northern railroads for an injunction against enforcement of the Commission's specified lower freight rates on coke from Southern ovens which went into effect August 13. A hearing before the Federal Court in Chicago will be given October 17. The reduced rates on coke from Southern ovens to points in central territory established practically the same mile for mile rate from the South to the North as applied to the transportation of coke within the North. Southern industry, aided by Southern carriers, for years sought to secure this equalization of rates for the South, and in establishing practically the same basic rate prevailing in the North on coke gives hope of further adjustments in other Southern commodity rates.



# Growing Movement to Reduce and Equalize Freight Rates in the South

By

W. L. Thornton, Jr.

President, The Southern Traffic League

**S**OUTHERN industry and commerce have gradually become aroused at the serious handicaps under which they are required to labor because of the inconsistent and outworn system of freight transportation rates. These handicaps will eventually result in a combined movement to definitely force the issue and to force the rail carriers to grant justice to Southern industries.

Southern carriers have repeatedly announced their purpose and policy of establishing rates on Southern manufactured products into other territories no higher, mile for mile, than paid by their Northern competitors. This policy would mean an equality of rates for Southern shippers but, unfortunately, the mere announcement of a policy by the Southern carriers will not correct the situation. The inability of the Southern carriers to effectuate this policy is attributable to two things:

First, the resistance of the railroads in the North who apparently are trying to build a freight rate wall around the South for the purpose of preventing the movement of Southern products into the territory north of the Ohio and Potomac Rivers, and second, to the insistence on the part of the Southern carriers on maintaining a higher level of class rates in the South than in the North.

Appeals to the Interstate Commerce Commission in numerous formal complaints by shippers or investigations instituted by the Commission have not resulted in any appreciable relief from the situation because apparently, it has been the policy of the Commission to consider the South as being a "higher rated territory" the result of which is to establish rates on a higher level than from competing Northern manufacturing points. The decisions of the Interstate Commerce Commission have not required the Northern carriers to join the Southern carriers in granting an equality of rates notwithstanding the contentions of Southern shippers and the announced policy of the Southern carriers.

The obvious solution of this problem is for the Southern railroads, voluntarily, to establish within the South the same basis of class rates as within the North which automatically would force the Northern carriers to join in a uniform basis of rates through the territory east of the Mississippi River. The Southern carriers have been reluctant to take this action because of the fear that to do so would mean a loss in revenues. Actually, however, the Southern carriers are not charging their full class rates within the South on a large proportion of the moving traffic and the adoption of the Northern level of rates within the South would not substantially affect their revenues. On the contrary, it is the contention of the Southern shippers that such a reduction would increase

their traffic sufficient to actually increase their revenues. The trucks have made inroads in the transportation of commodities both within and from the South because of the unfair and discriminatory freight rate adjustments. The dissatisfaction on the part of the Southern shippers had reached such proportions a year or so ago that an effort was made to discuss the matter with the Southern carriers in the hope that it would result in a voluntary readjustment of the rates to a proper basis.

## South Penalized by Adverse Freight Rate Differential

Continuation of the Prevailing Class Freight Rate Policy Is Detrimental to Southern Producers, Industry, Railroads and to the Entire Economic and Social Welfare of the South

By

Carl R. Cunningham

Manager, Traffic Department, American Cotton Manufacturers Association

**T**HE flow of commerce between all sections of the country is a matter of major importance to the development of the nation as a unit. The Southern states have been penalized by the imposition of differentially higher freight rates which retard the development of industry in this section and the distribution of products therefrom.

The general freight rate disparity which now penalizes the South, and which, if increased, will impose a further penalty on the South, cannot be overcome in any way except to force Southern producers of raw materials and Southern manufacturers of finished products to accept a less return on their capital and for their efforts than is enjoyed by those who are fortunate enough to be located in the Northern states.

In such circumstances, the volume of production and the relative traffic density in the South will naturally become still less than in the Northern states. If the railroads and the rate regulatory bodies adhere to the principle of applying higher rates where the total of all traffic is less, the use of such smaller traffic density as a reason for applying still higher rates in the South would continue the vicious circle until the rates become so high that no traffic could move and both Southern industries and railroads would have to be abandoned.

The Southern people are waking up to this situation—but probably few realize the far reaching effect of a policy that would strangle the development of this section by preventing the distribution of products except at a penalty charge detrimental to the economic and social welfare of the South.

Southern commerce and industry cannot expand and develop to its fullest extent without fair treatment from the transportation companies. Either this fair treatment must be granted voluntarily by the railroads or long and bitter litigation before the Federal regulating authorities will be necessary.

The Southern Traffic League, with headquarters at Nashville, Tenn., has filed a petition before the Interstate Commerce Commission for an investigation of the class rate level in the Southern territory with the view to bringing about a re-adjustment of freight rates. This is part of the concerted action by shippers of the South and the State Regulatory Authorities to promote the free movement of goods between points in the South and at the same time go far toward the removal of discriminations in interterritorial rates.

The railroads of the South are favorable to an equality of freight rates when within their power to control. Unfortunately they do not reach with their own rails some of the more vital markets of the North, and are powerless to act without the concurrence of their Northern connections.

It is particularly important that each section of the country should be accorded an equal opportunity to develop its natural resources and there should be no adjustment of transportation charges on any basis that would penalize the conversion of the natural resources into finished products in this section. If the South is not permitted to obtain its rightful benefit from the manufacture of its resources in this section then it must be doomed to agricultural and mining activities, sending the natural resources of the South into other sections to be manufactured.

The economic and social welfare of the Southern states is vitally affected by the extent to which there may be a complete and normal development of all of the resources in this section. Cotton is the principal product of the South and it is very important to the normal and proper development of the Southern states that the industries engaged in the processing and manufacture of cotton be maintained within this section of the country.

The cotton manufacturing industry with its 1096 units is now the largest industry in the South, producing \$780,000,000 worth of goods annually and employing in excess of 275,000 citizens at a total annual wage of more than \$200,000,000. This employment is of value to all of the people in this section, since the location of industries, whereby a substantial portion of those living in this territory are employed in manufacturing, is beneficial in preventing further depression in the value of farm products that would result if they were required to be engaged in agriculture, in which there is already an

(Continued on page 74)

# PROGRESS IN STEEL

## *Growing Replacement, Rehabilitation and Modernization Demand; Increasing Industrial, Construction and Household Markets; New Uses and Improved Steels Presage a Production to Pass All Previous Records*

**T**O a great many people, the comparatively high level at which the steel industry has operated thus far in 1936 has been somewhat of a surprise.

It was no surprise to practical steel men.

We, in the steel industry, had long predicted and looked forward to a period of sustained demand for steel—just as today we predict and look forward to a time when steel production and steel sales will far surpass all previous records in the United States.

That expectation was based upon the certain knowledge that during the depression years the use of steel was greater than production. Not only were many products of steel, such as automobiles, being worn out and not replaced, but there was great obsolescence and depreciation in plant equipment.

All this could mean but one thing. If American living standards were to be maintained, the accumulated needs for steel and for the products of steel would have to be made up.

Still another factor has contributed to the current recovery, and that is the development of new steels and new uses for steel, especially in the lighter lines, which have to do with homes, household and labor saving devices, foods, and family transportation.

The recovery in automobile production gave the first important impetus to steel's upturn, but to this demand has been added that from many other important consuming sources, among them many of the users of heavy steel.

### ***Industrial Markets for Steel***

**In the beginning of 1936 the need for steel for rehabilitation of plant and equipment was enormous. It still is enormous. The replacement of old equipment by new which has taken place this year has merely scratched the surface.**

The important factor to bear in mind in this connection is the fact that replacement meant far more than the term implied. Old machinery could not be replaced by machines of the same type as those discarded—for not only the old models, but the steels of which those models were made, had become obsolete. Factories needed new machines of new and more efficient types, made of new and better steels—machines which could increase productivity and cut costs and show black ink in highly competitive markets.

The plant and equipment trend has been not literally one of replacement—it is rather one of displacement of old type equipment, made of old steels, by new type equipment made of new steels which have been developed during the last five years. There is an enormous amount of plant

equipment which is not old, but which cannot compete in productivity or efficiency with modern equipment made of newer steels.

The potential market for steel therefore is built upon a remarkably broad and solid foundation. On top of the need of replacing equipment which is actually old and worn out, there is an equally great or greater need of displacing obsolete, though not worn-out equipment, by machines and steels capable of turning out production and taking punishment to an extent unknown five years ago.

The size of the potential industrial market for steel is indicated by the fact that an estimated 65 per cent of the more important factory equipment in the United States is over ten years old. On top of that it is no exaggeration to state that most factory equipment now five years old is not capable of standing the punishment or attaining the productivity of the machines and equipment built today, with the improved design made possible largely because of new steels which have now passed from the laboratory stage into the phase of practical commercial production.

There are hundreds of illustrations. By

By

**T. M. Girdler**

Chairman and President  
Republic Steel Corporation



the use of today's new alloy steels a truck can be made 30 per cent to 40 per cent lighter than before, and yet still capable of carrying the same load. The weight of freight cars may be reduced by nearly one-third, due to today's new steels. This makes possible a substantial increase in pay loads.

Steel makers today are able to make new steels which are capable of being fabricated into almost any conceivable form or shape. The steels of yesterday "couldn't take it." Today's steels can take it. A single bang of a press will transform a sheet into a fender, a box car door, a top or a refrigerator section.

New steels have recently been developed which are capable of resisting corrosion to an extent never obtained before. This opens up immense possibilities for industrial replacement—in fields such as petroleum refining, where the heat is terrific, in chemical plants, where resistance to acid is vital, in paper manufacturing and other plants, where resistance to brine



and other strong solutions are essential. Throughout the whole field of plant machinery and equipment, new steels, stronger steels, lighter steels, steels especially adapted to the purpose which they are to perform, are helping to create a sustained demand which will grow.

### Household Markets for Steel

Aside from the demand for steel for industrial use, there has been developing a steadily increasing demand for steel for household use—steel which enters into the daily lives and occupations of all American citizens. A recent survey shows that the average home today contains at least 900 pounds of steel.

In the home we find steel in the plumbing, the kitchen stove and utensils, in the bed springs, in the vacuum cleaner, washing machine, electric iron, toaster, lamps, refrigerator, scissors, table utensils, and a host of other places. In the homes of tomorrow, it is very probable that most of the furniture will be made of steel. In fact, the house itself may be built of steel frames. Whether the householder travels by automobile, by bus or by train, he is indirectly a purchaser of steel.

The ordinary householder also purchases steel as a consumer's product whenever he goes to the grocery store. When he buys canned vegetables or canned beer, he is buying steel. When he buys milk, cheese, fruit or other products which must be kept clean and pure, he is indirectly buying the type of steel which makes possible the manufacture of sanitary and purer foods. When he buys meat or perishable fruit, he is buying indirectly the type of steel which makes possible modern methods of refrigeration and transportation.

So steel has come to be very definitely a consumer's product—that is, a product which is bought by the average householder and the average wage earner, in the same way that the average consumer buys beans or clothes or potatoes.

As the result, the whole merchandising and advertising policy of the makers of steel is undergoing an important change. Steel makers used to sell and advertise their steel only to manufacturers, who in turn used this steel in the making of their products. Today, the makers of steel are beginning to sell steel, and the uses of steel, to the general public.

The growing use of steel on the part of the individual householder has arisen largely because of the development and perfection of special steels, especially adapted to the wide variety of uses which are found for steel in the home. A constantly increasing household demand, added to the industrial demand, provides a very logical foundation for the expectation of a larger steel production in the near future than this country has ever seen before.

### Employees and Stockholders

The steel industry is one of the largest industries in the United States. It is significant that the industry has about as many stockholders as it has employees.

In round numbers, employees and stockholders of the industry number about a half a million each.

In the steel industry, the day has long since passed when management conducted business for its own benefit. Today steel executives are hired men, running businesses ostensibly on behalf of stockholders, but actually, to a large extent, on behalf of employees.

The industry has constantly maintained wages on a level above the average for most industries. A recent survey made by the American Iron and Steel Institute shows that weekly wages received by steel employees average more than 18 per cent higher than the average wages for employees for all manufacturing industries. Hourly wage rates in the industry actually are about 7 per cent above the 1929 level, and although operations are not so high as in 1929 the industry is employing 48,000 more people than in that year.

Steel manufacturers, during the depression and since the depression, have constantly realized their responsibilities as employers. They have maintained a proper wage to employees at the expense of stockholders. In 1935, when iron and steel pay rolls exceeded \$550,000,000, stockholders received less than \$39,000,000. Out of every dollar received from the sale of steel products, 41 cents went to pay rolls, while dividends got only 1½ cents. From 1931 to 1934, while the industry as a whole was losing \$285,000,000, total pay rolls amounted to more than \$1,500,000,000.

Under the corporate set-up which exists in this country today, management in the steel industry has taken the position of umpire between the stockholders on the one hand, and the employees on the other. During the depression years, there was no question as to what course of action should be adopted. Employees had to be taken care of. Workmen and their families had to get enough to live on. Stockholders could wait.

And the stockholders did wait. They have been waiting, now, for about five

years. This year earnings appear to be forthcoming. It seems only fair to management in the steel industry that now stockholders should once more be entitled to receive some return on invested capital. The stockholders stood by, minus dividends, during the period when all resources had to be turned toward keeping employees on a living wage. Now that operations and hourly rates are at a level which assure employees a fair income, it seems only reasonable to permit the stockholders once more to begin to share in the rewards of increased business.

### Increasing Taxes

If it were not for taxes, the problems of management in acting as an umpire between employees and stockholders would be much simpler.

The fact is that the margin of income which should be available for better wages to employees and larger dividends to stockholders is constantly absorbed by increasing taxes, which threaten, on the basis of present Federal expenditures and contemplated tax plans, to swallow up the major share of net profits of all business.

In 1935 taxes paid by 127 leading steel companies were much larger than their net earnings, and were nearly double the amount paid to stockholders in dividends. The industry's 1935 tax bill was about 16 per cent higher than it was in 1934. It amounted to about \$75,000,000 paid to Federal, State and local Governments.

Since 1900 the proportion of the steel sales dollar going to pay rolls has increased by 50 per cent; that going to stockholders has declined substantially, while that going to the tax collector has increased by 800 per cent.

Taxes paid in 1935 amounted to \$103 per steel employee and \$132 per steel stockholder. Dividends paid in 1935 averaged only \$71 per stockholder. With new tax legislation already enacted and future tax legislation which may be needed to pay for the spending spree upon which the Federal Government is now engaged, it seems likely that management will not have to worry about how much to give to employees, and how much to give stockholders. If there is any increase, the Government will probably take all.

But regardless of the nature and extent of Federal taxes—regardless of the form of government under which we may live and under which business may have to be conducted—the demand for steel will, in my opinion, inevitably continue to increase.

More steel is needed in industry—more steel is needed in the home.

The needs of the people—the constant desire for more comfort, more leisure, more transportation—must inevitably be met.

The needs of industry for better equipment and more productive machinery must inevitably be met—and I repeat, with the utmost confidence, the prediction that the production of steel, in the near future, will pass all previous records in the United States.

## The South's Importance In Iron and Steel Making

In the South are located 30 iron and steel plants giving employment to more than 16,000 persons and having an annual payroll in excess of \$18,000,000.

Nearness to ample resources of raw materials, such as iron ore, coal, and limestone, enables the main part of the steel industry of the South to be completely integrated, and it is equipped to produce almost every type of product manufactured by the iron and steel industry.

Iron ore mined in the South is now at the rate of over 3,300,000 tons annually and the output of its blast furnaces about 5,000,000 tons a year with present capacity available to expand operations as demand increases.



# BROADEN MARKETS FOR CEMENT

By

**Blaine S. Smith**

President, Universal Atlas Cement Co.

**With Increased Construction and New Uses Being Developed Cement Shipments Gain 47 Per Cent Over 1935.**



Blaine S. Smith

**T**HERE is reason to feel encouraged over conditions in the construction and cement fields. This feeling is based on:

1. Improvement in construction;
2. Gain in cement shipments;
3. Increase in the newer uses for cement.

Construction this year shows a marked increase over 1935. Contracts awarded in the United States for the first seven months of 1936 were reported to have exceeded in value those for the corresponding period last year by 78 per cent. This is encouraging, although, to get a true perspective, it should be borne in mind that 1935 was a subnormal year. If the 1936 record is compared with what usually is called a "normal" year (1926), it is found that even with the improvement made, we still are 58 per cent below normal. However, any move upward in these times is heartening and it is hoped that future conditions will be such as to encourage still larger increases until the industry gets back on its feet.

As might be expected because of its close connection with construction, the cement industry exhibits a similar trend. U. S. Bureau of Mines figures show that cement shipments for the first seven months of 1936 were 47 per cent ahead of the same months last year. Even with this increase, however, they were 35 per cent below 1926. For the 12 months ended July 31, the industry's producing capacity was 66 per cent idle. But if the construction trend continues upward, as is hoped, demand for cement should increase and help to raise shipments more nearly to normal.

## New Uses for Cement

A third reason for feeling encouraged about the future is the many new uses that are being found for cement. With the further development of these new uses, continued improvement in construction and in shipment of cement may be expected. Some of these new uses may be briefly mentioned.

Concrete houses and concrete floor joists. Proof against fire, decay, termites and storm and with reasonable first cost and little maintenance, concrete homes are rapidly growing in popularity. A survey in 1934 by the U. S. Department of Commerce showed that only one-half of one per cent of existing homes were concrete. Last year two and one-half per cent of all new homes built were con-

crete, and it is estimated that three times as many will be built this year as in 1935. The Federal Government is building 2,000 such homes, many of which will have pre-cast concrete floor joists on which a concrete floor slab will be placed. One Federal project alone will contain 164,000 lineal feet, or over 31 miles, of concrete floor joists. The number of plants making pre-cast concrete floor joists increased in two years (1933-1935) from 20 to 120, indicating the demand for this product.

Following the hurricane disaster last year in the Florida Keys, 29 concrete homes were built, anchored to the rocks. These are both for residence use and as a haven of safety in case of future hurricanes. The Portland Cement Association's model concrete home at the Texas Centennial exposition is attracting thousands of visitors. It is one of more than 100 similar concrete demonstration homes built this year in the United States. With an estimated housing shortage of two and one-half million units and with residential construction showing large increases, this field affords a substantial new market for cement.

## Architectural Concrete

In the last two years the Architectural Concrete type of construction is a new use of cement which has given beauty as well as durability to industrial plants, commercial structures, public buildings, theaters, hotels, apartments and other

### A Distinctive Exterior of Architectural Concrete

The new printing and engraving plant of Clarke & Courts, Houston, Tex. Joseph Finger, architect. Southwestern Construction Co., builders.



improvements. This new method enables exterior walls and ornamental detail to be cast together with the frame and floors. The Borden plant at San Antonio, Texas, and the tornado-proof Hall County jail at Gainesville, Ga., which successfully withstood the hurricane last spring when many surrounding structures were demolished, are two excellent examples of architectural concrete in the South among other structures in the country which illustrate the effectiveness of architectural concrete in combining beauty and utility. Not more than three of such structures were built east of the Rocky Mountains in any one year prior to 1935. Last year 74 were built and this year the total so designed is expected to run over 600. This new use for cement has a large potential market.

## Concrete Rigid Frame Bridge

Suitable for all purposes, usually not exceeding 100 feet in length, the new type Concrete Rigid Frame Bridge is cast in one continuous monolithic operation. The finished bridge with its flat arch design requires no center supports which often are the cause of accidents. Far-reaching advantages are gained from the shallow floors possible in rigid frame bridge construction, particularly in flat country where headroom is limited. Substantial reductions are obtained in volume of embankment fill or excavation and in area of land required for the approaches. When such bridges span streams they make possible a greater area for the passage of water. The cost of rigid frame concrete bridges is lower than that of former types of concrete bridges. Maintenance is negligible and such bridges may be widened with but slight alterations of the existing structure. In addition to these advantages, the rigid frame concrete bridge has brought about a new type of bridge architecture of pleasing and aesthetic appearance. Its popularity is shown by its rapid growth. In 1930 only 25 were built, last year 250 were built and the number this year will be still larger.

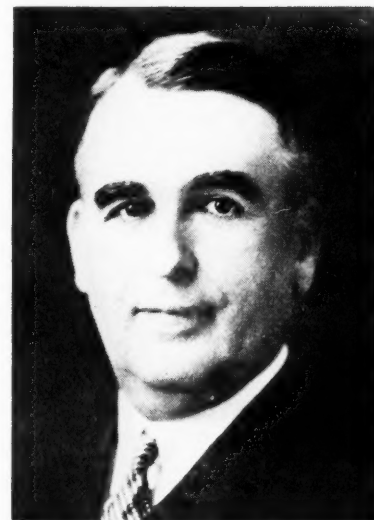
## Secondary Roads of Concrete

While standard concrete pavement has long been recognized as of the best for main heavily traveled highways, recently there has been developed a satisfactory concrete pavement at less cost for secondary roads carrying lighter traffic. Frank T. Sheets, former Chief State Highway Engineer, Illinois, now Consulting Engineer for the Portland Cement Association, is originator of the idea of designing

(Continued on page 66)

# BALANCING AGRICULTURE WITH INDUSTRY

## *Mississippi Passes Revolutionary Legislation Enabling County and Municipal Governments to Finance, Build and Operate Industrial Plants*



Governor Hugh L. White

**T**HE Mississippi Legislature, in special session, adopted practically without change an industrial development program presented by Governor Hugh L. White. Governor White, lumberman and business executive, whose administration thus far has to its credit a \$42,000,000 highway program and insistence upon business methods in all State political departments, called in outstanding legal authorities regardless of political affiliations in drafting the bill, the fundamental principles of which recognized Mississippi's necessity to protect the welfare of its people by creating a sounder balance between agriculture and industry.

Major features of the program are the creation of an industrial commission to go after industries that Mississippi, by reason of its climate, its labor and its natural resources, can best hope to obtain; and the provisions that Mississippi cities and counties may issue bonds with which to purchase factory sites, place buildings thereon, and if necessary operate the plants.

### **Provides Safeguards**

To protect the State from extravagant spending, the act contains two major safeguards.

First, any city or county desiring to issue bonds must prove that it has sufficient natural resources readily and economically available for the operation for at least ten years of the particular industrial enterprise under consideration; that it has available an unemployed labor supply at least one and one-half times as large as that which will be needed in the proposed establishment, and that it has adequate property values and suitable financial conditions to justify it in issuing funds without unreasonable burden upon its taxpayers.

Second, the qualified electors of any community desiring to issue bonds for industrial purposes must favor any pro-

posed bond issue by a two-thirds majority of those voting.

The industrial commission created under the act must pass upon the application of any community or county and must make a detailed survey upon the basis of which it may fix and determine the extent to which bonds may be issued, what property may be required, and what expenditures may be made for the establishment and operation of the enterprise.

To protect communities of the State still further, the act specifies in detail just what industries come within the scope of its provisions, such industries being those which by their nature depend upon the resources and raw materials of the State.

### **Bonds and Interest Tax Exempt**

All bonds issued pursuant to the Act and all interest thereon or income therefrom are exempt from all taxation except gift, and inheritance taxes. Necessary taxes levied and collected for the payment of the bonds and interest shall not be considered or accounted in any limitation on the powers of the municipality to tax except as otherwise provided.

### **Five Year Tax Exemption**

All new factories and new enterprises of public utility established under the provisions of the Act are exempt from all ad valorem taxation on tangible property used in or necessary to the operation of the service or industry, but not the products thereof, for a period of five years. The new factories and enterprises which are exempted from taxation are listed as follows:

All factories making cotton goods; woolen mills; knitting factories; factories for making hosiery; rope factories; factories for manufacturing machinery and farming implements in a finished state for consumer use without additional process or labor; automobile tire factories, tubes, or tire fabrics;

automobiles; stoves; wagons; buggies; clothing; shoes, or parts thereof; furniture factories, fixtures, utensils, or implements of either wood or metal or other materials for use in homes, hotels, schools or offices; coffin factories; cement factories, building tile, drain tile, brick, clay products, or products in which sand and clay are used; glass or glass products; wood veneering plants; creosoting plants; wood pulp used in the manufacture of paper, pasteboard, and like products; factories for making paper or paper products out of wood pulp, cotton stalks, or other material; wood reduction plants engaged in the business of extracting resin, turpentine, pine oil and like products from wood pulp and refuse; soap and chemical making; creameries, cheese factories, milk condensing; pork packing and cold storage plants; canning, packing or preserving food other than beverages; pecan shelling and/or packing plants, tanneries and factories for making leather products; factories run exclusively by water power; factories manufacturing cotton fiber from cottonseed hulls and linters, pure cellulose, or high alpha cellulose from cottonseed hulls and linters; oil mills and factories grinding agricultural feeds; garment factories; shipyards; construction and repair of airplanes or other aircraft; extraction or manufacture of tung oil, paint factories; silk goods or silk products; domestic fats and oils; syrup refineries, and plants which prepare building material out of stone.

Any Port Authority or commission created by law, operating in any county or municipality of the State is authorized and empowered to assist and cooperate with such county or municipality to effectuate the purpose of the Act.

# \$79,258,000 SEPTEMBER AWARDS

**E**NGINEERING and building activity in the Southern States has been making new high records in recent months. Contracts let during September amounted to \$79,258,000, which brought the total for the nine months ending September to \$656,722,000, according to the *Daily Construction Bulletin*. This is the highest figure for any September since 1927 and the highest awards for the first nine months of any year in the past six. Construction awards so far in 1936, with three months to go, are greater than for the entire 12 months of 1935 and in fact more than reported for each of the past five years.

## Industrial, Private Building and Public Work All Gain

Industrial expansion, which reached nearly \$178,000,000 for the nine months of 1936, is \$40,000,000 more than for the 12 months of last year and more than double similar awards in 1934 and 1933.

Private building, aggregating in excess of \$273,000,000, has continued to increase in importance, being about double the rate of 1935, three times 1934 and nearly four times 1933.

Public construction for the nine months totals about \$383,000,000 as compared

with \$408,910,000 for the 12 months of 1935 and \$392,000,000 for 1934.

Roads and bridges for which contracts have been let in the past nine months are valued at \$182,402,000. September's total for this class of construction amounted to \$18,394,000.

Government building construction awards were higher in September than in August. Starting the year with an accelerated pace, this type of work dipped in March, May, June and August, with proposed projects in September estimated at \$28,457,000 indicating a strengthening in the immediate future.

Proposed expansions in Southern industry during the month almost doubled the figure for August with a number of large and important additions about to be undertaken.

## Basic Industries Active

A \$250,000 remodeling project is soon to be started at the Bessemer-Alabama plant recently acquired by the Flower Valve & Foundry Co. which involves installation of machinery for manufacturing valves, hydrants and other specialties as well as foundry work and erection of an office building with a cafeteria. At Beckley, W. Va., a coal tippie to have an annual output of 1,800,000 tons will be constructed on property recently acquired by Harry E. Moran, of New York.

## Highest Construction Total in the South for any September Since 1927, and \$656,722,000 in First Nine Months Sets Six-Year Record

Down at Clemens Dome, in Brazoria County, Texas, the Jefferson Lake Oil Company is getting ready to start developing a \$500,000 sulphur plant. Kaolin, Inc., Indianapolis, proposes a Kaolin Refining plant at Spruce Pine, N. C. The Texas Gulf Sulphur Co. is making a survey in the Moss Bluff area south of Liberty, Tex., with the view of constructing a plant. Troy, Ala., is to be the location of an acidulating plant to produce superphosphate for the Alabama Warehouse Co. The Monsanto Chemical Co. is starting construction on a \$2,000,000 phosphoric acid plant in Tennessee.

## Ethyl Plant Proposed

Field work is under way on the \$2,000,000 Ethyl manufacturing plant to be constructed in the vicinity of Baton Rouge, La., by E. I. du Pont de Nemours & Co. Hanlon-Buchanan, Inc., of Tulsa, Okla., propose a \$100,000 gasoline plant at Corpus Christi, Tex. H. K. Burns, Lorane, Ga., obtained permit for a \$25,000 brick plant at Macon. Ryan McBryde, Raeford, N. C., acquired the Scarboro Lumber Co. and will enlarge capacity. The Houston Manufacturing Co., veneer concern, of Kathleen, Ga., will erect a new mill south of Abbeville.

The Tubize-Chatillon Corp., at Rome, Ga., has foundations under way for a \$2,500,000 plant extension to increase its facilities. An addition is to be made to the Spruance plant operated near Richmond, Va., by the cellophane division of E. I. du Pont de Nemours & Co. The Owens-Illinois Can Co. applied for a permit to construct a \$300,000 unit in Baltimore. P. Lorillard Tobacco Co. has awarded contract for a \$150,000 storage and aging plant at Danville, Va.

## Adding Beverage Facilities

Contract has been let for wrecking and excavating for the brewery building proposed by Anheuser-Busch, at St. Louis, Mo. The Miami Springs Distilling Co. proposes a \$100,000 distillery near Hialeah, Fla. Frankfort Distilleries, Inc.,

(Continued on page 46)

## SOUTHERN CONSTRUCTION ACTIVITY

	—September, 1936—		—January-Sept., 1936—	
	Contracts awarded	Contracts to be awarded	Contracts awarded	Contracts to be awarded
<b>General Building</b>				
Apartments and Hotels..	\$4,005,000	\$2,425,000	\$22,591,000	\$18,001,000
Association and Fraternal	55,000	125,000	820,000	2,783,000
Bank and Office .....	405,000	725,000	3,798,000	3,608,000
Churches .....	485,000	530,000	2,793,000	11,320,000
Dwellings .....	7,200,000	6,629,000	46,188,000	28,100,000
Stores .....	3,725,000	4,330,000	15,732,000	18,871,000
	<b>\$15,875,000</b>	<b>\$14,764,000</b>	<b>\$91,922,000</b>	<b>\$82,683,000</b>
<b>Public Buildings</b>				
City, County, Government and State .....	\$11,945,000	\$28,457,000	\$96,367,000	\$173,829,000
Schools .....	1,845,000	13,532,000	40,352,000	72,508,000
	<b>\$13,790,000</b>	<b>\$41,989,000</b>	<b>\$136,719,000</b>	<b>\$246,337,000</b>
<b>Roads, Streets and Paving</b>	<b>\$18,394,000</b>	<b>\$35,652,000</b>	<b>\$182,402,000</b>	<b>\$275,280,000</b>
<b>Industrial and Engineering Projects</b>				
Drainage, Dredging and Irrigation .....	\$4,775,000	\$2,810,000	\$19,011,000	\$108,132,000
Filling Stations, Garages	530,000	730,000	3,937,000	5,336,000
Industrial Plants .....	18,821,000	49,577,000	177,702,000	344,643,000
Levees, Revetments, Seawalls, Dikes, etc. ....	1,765,000	9,480,000	12,926,000	24,124,000
Sewers, Drainage and Waterworks .....	5,308,000	16,924,000	32,103,000	77,121,000
	<b>\$31,199,000</b>	<b>\$79,521,000</b>	<b>\$245,679,000</b>	<b>\$559,356,000</b>
<b>Totals .....</b>	<b>\$79,258,000</b>	<b>\$171,926,000</b>	<b>\$656,722,000</b>	<b>\$1,163,656,000</b>





**"WE STUDIED *all*  
OF THEM - WATCHED  
THEM PERFORM . .  
*then bought a*  
MARION"**

**SAYS**

*H. L. Gray*

General Manager

**THE MEADOW RIVER LUMBER COMPANY**  
Rainelle, West Virginia

"When we buy new equipment, we do not jump at conclusions nor permit fancy sales talks to sway our judgment—we weigh the facts. When we purchased our Marion Type 351 one and a quarter cu. yd. shovel it was purely on an engineering basis. The Marion came closest to meeting our rigid specification. This is confirmed through the excellent showing it has made in railroad construction through rock and other hard digging on our lumber properties. This makes our fourth Marion, all of which have given us dependable service." " " "

# MARION

## CLUTCH TYPE EXCAVATORS

**A MACHINE FOR EVERY MATERIAL HANDLING JOB**

WRITE FOR BULLETINS DESCRIBING SIZES OF  
MACHINES IN WHICH YOU ARE PARTICULARLY INTERESTED

**THE MARION STEAM SHOVEL COMPANY**  
**MARION, OHIO, U. S. A.**

The Marion Type 351 owned by The Meadow River Lumber  
Company at work clearing a new logging road.



## \$79,258,000 September Awards

(Continued from page 44)

were scheduled to open bids for a ten-story warehouse at Baltimore, Md. An addition is to be made to the San Antonio (Texas) Brewing Association's fa-

cilities. The Owings Mill Distillery in Maryland revised plans for a bottling house. Griesedieck Bros., St. Louis, Mo., propose brewery facilities to cost \$350,000.

Norfolk Newspapers, Inc., at Norfolk, Va., plan a large newspaper publishing plant, a similar plant being proposed at Greenville, S. C., for the Greenville News

and Piedmont. A plant is reported to be planned for Tampa, Fla., by the Continental Can Co., while Acme Box Co., Inc., Baltimore, Md., will add to its plant. The Pelican Well, Tool & Supply Co., Shreveport, La., will erect a branch at Houston, Tex. An investment of \$100,000 is being made in the same city for a plant to be operated by the Queen Cleaners & Dyers.

## Representative Projects In The South Last Month

### Proposed Construction

Ala., Birmingham—S. H. Kress & Co., New York Store	\$600,000
Ala., Bessemer—Flower Valve & Foundry Co. Plant improvements	250,000
Ala., Tuscaloosa—U. S. Engineer Dam	3,000,000
Ark., Fayetteville—University of Arkansas Dormitory, Wittenberg & Deloney, Archts., Little Rock	150,000
Ark., Marked Tree—Drainage District No. 7 Drainage ditches, Morgan Engineering Co., Engrs., Memphis	229,000
Fla., Miami Beach—George B. Holden, Agent Meat Market, Gordon E. Mayer, Archt.	110,000
Ga., Dalton—North Georgia Electric Membership Corp. Power lines	870,000
Ga., Thomaston—City and Upson County Hospital	240,000
Ga., Atlanta—City Central Fire Headquarters, Robert & Co., Engrs.	150,000
Ga., Gainesville—Dixie Hunt Hotel Hotel and store, William J. J. Chase, Archt., Atlanta	150,000
Ky., Middlesboro—City Power plant, J. S. Watkins, Engr., Lexington	175,000
La., Baton Rouge—E. I. du Pont de Nemours & Co., Wilmington, Del. Ethyl plant	2,000,000
La., Abbeville—City Sewers, J. B. McCrary Co., Atlanta, Ga., Engrs.	180,000
La., Plaquemine—City Sewers system, L. J. Voorhies, Engr., Baton Rouge	245,000
La., New Orleans—City Charity Hospital, Weiss, Dreyfous & Seiferth, Archts.	8,000,000
Md., Cumberland—City Filtration plant	1,000,000
Md., Silver Spring—Federal Housing Administration Housing project, Louis Justement, Archt.	1,100,000
Md., Baltimore—City Bridge	500,000
Md., Baltimore—Owens-Illinois Can Co. Plant addition, Francisco & Jacobus, Archts.-Engrs., New York	300,000
Md., Annapolis—Anne Arundel County Schools	215,000
N. C., Charlotte—City Water works, J. B. Marshall, City Manager	1,000,000
Mo., Hine—St. Louis County Water Co. Filtration plant	750,000
Mo., Vandalia—City Water works, Black & Veatch, Engrs., Kansas City	121,000
Okla., Oklahoma City—Triple XXX Co. Restaurant	100,000
S. C., Charleston—Clyde-Mallory Line Pier	500,000
Tenn., Jackson—West Tennessee Electric Membership Corp. Power lines	335,000
Tex., Beaumont—Petrol Refining Co. Refinery	1,000,000
Tex., Port Arthur—Board of Education High school, Mark Lemmon, Archt., Dallas	480,000
Tex., Houston—Interstate Circuit Community store, theatre, Joseph Finger, Inc., Archts.	300,000
Tex., Corpus Christi—Hanlon-Buchanan, Inc., Tulsa, Okla. Gasoline plant	100,000
Tex., San Antonio—The Texas Centennial Commission Memorial Building, Ayres & Ayres and Phelps & DeWees, Archts.	100,000
Tex., Odessa—W. L. Bradley Office building	150,000
Tex., Bay City—City Electric distribution system, Garrett Engineering Co., Engr., Houston	225,000

### Contracts Awarded

Ala., Birmingham—City Impounding dam, Walsh Construction Co., Contr., Davenport, Iowa	\$1,685,000
Ala., Birmingham—Federal Housing Administration Housing project, Algernon & Blair, Montgomery (low bidder)	1,515,000
Ark., Crossett—Crossett Housing Corporation Dwelling construction, McGregor & Pickett, Archts., Little Rock	320,000
Ark., Little Rock—City Sewers, Ben M. Hogan, Little Rock, Nolan Construction Co., Detroit, Mich., G. C. McEachin Construction Co., Little Rock (low bidders)	238,000
D. C., Washington—Alley Dwelling Authority Apartments, Bahen & Wright (low bidder)	144,000
D. C., Washington—Treasury Department	

Warehouse building, Charles H. Tompkins Co. (low bidder)	1,048,000
D. C., Washington—Architect of Capitol Capitol substation work, Harry Alexander, Contr.	101,000
D. C., Washington—Washington Airport Runways, taxi strips, aprons, James Gibbons Co., Contrs., Relay, Md.	100,000
D. C., Washington—Adolph Gobel, Inc. Packing Plant, Turner Construction Co., Contr.	100,000
Fla., Gainesville—University of Florida Building, Beers Construction Co., Contrs., Atlanta, Ga.	198,000
Fla., Tallahassee—State of Florida Addition to Capitol, Beers Construction Co., Atlanta, Ga. (low bidder)	174,000
Fla., Jacksonville—Duval County Jail addition, O. P. Woodcock, Contr., Jacksonville	103,000
Fla., Jacksonville—U. S. Engineer Levee work, E. H. Latham Co., Contr., West Palm Beach	239,000
Ga., Atlanta—City Sewage disposal plant, Hardaway Construction Co., Columbus (low bidder)	372,000
Louisiana—Levee Board Levee work, Lewis-Chambers Construction Co., Contrs., New Orleans	150,000
Md., Crisfield—City Sewers, George & Lynch, Dover, Del. (low bidder)	125,000
Md., Cumberland—Celanese Corporation of America Power plant, George F. Hazelwood, Contr.	300,000
Md., Baltimore—City Municipal airport, Arundel Corp. (low bidder)	1,326,000
Md., Glendale—District Commissioners Tuberculosis Sanatorium, Carlstrand Engineering Co., Baltimore (low bidder)	115,000
Miss., Gulfport—Veterans Administration Infirmary, Algernon Blair, Montgomery, Ala., Contr.	239,000
Mo., Kansas City—City City Hall, Swenson Construction Co. (low bidder)	1,005,000
Mo., Nevada—State Building Commission Clinic and kitchen, Winn Construction Co., Kansas City (low bidder)	278,000
Mo., Farmington—State Building Commission Hospital building, Boaz-Kiel Construction Co., Contr., St. Louis	412,000
Mo., Farmington—State Building Commission Hospital and infirmary, McCarthy Bros., St. Louis (low bidders)	222,000
Mo., St. Joseph—State Building Commission Hospital and kitchen, Lehr Construction Co. (low bidder)	303,000
Missouri—U. S. Engineer Missouri River work, Morrison-Glasscock-Connor Co., Contrs., Kansas City	239,000
Missouri—U. S. Engineer Mississippi River work, Massmann Construction Co., Contrs., Kansas City	2,111,000
N. C., Tarboro—Edgecombe County County home and tuberculosis sanitarium, D. J. Ross & Son, Contr., Rocky Mount	102,000
Okla., Tahlequah—Bureau of Indian Affairs Hospital, Rucks Construction Co., Tulsa (low bidder)	251,000
S. C., Columbia—Veterans Administration Hospital building, Virginia Engineering Co., Newport News (low bidder)	207,000
South Carolina—Rural Electrification Administration Electric lines, J. B. Britton, Sumter	159,000
Tenn., Nashville—Federal Housing Administration Housing project, Coath & Goss, Inc. (low bidder)	1,399,000
Tex., Houston—U. S. Engineer Dredging, Atlantic Gulf & Pacific Co., New York (low bidder)	372,000
Tex., Temple—Belfalls Light & Power Co. Rural electric lines, J. E. Morgan & Sons, Contr., El Paso	252,000
Tex., Texarkana—City Gas distributing plant and pipeline, Benson & Montin Construction Co., Contrs., Oklahoma City	1,200,000
Tex., Texas City—U. S. Engineer Dredging, Standard Dredging Co., New York (low bidder)	163,000
Tex., Henderson—Rusk County Courthouse addition, Mahaffey & Howard, Dallas (low bidders)	100,000
Tex., Port Arthur—Treasury Department Post office extension, James I. Barnes, Contr., Springfield, Ohio	199,000
Tex., Terrell—City Sewers, Powell & Powell, Engrs., Dallas; Walker Construction Co., Contrs., San Antonio	140,000
Tex., Fort Worth—Board of Education School, Harry B. Friedmann, Contr.	163,000
Tex., Galveston—U. S. Engineer Dredging, Atlantic Gulf & Pacific Co., New York (low bidder)	317,000
Va., Danville—P. Lorillard Tobacco Co. Storage and aging plant, C. W. Weber, Contr.	150,000



to be  
 Conti-  
 ., Inc.,  
 . The  
 hreve-  
 uston,  
 being  
 to be  
 Dyers.  
 048,000  
 101,000  
 100,000  
 100,000  
 198,000  
 174,000  
 103,000  
 239,000  
 372,000  
 150,000  
 125,000  
 300,000  
 326,000  
 115,000  
 239,000  
 005,000  
 278,000  
 412,000  
 222,000  
 303,000  
 239,000  
 111,000  
 102,000  
 251,000  
 207,000  
 159,000  
 399,000  
 372,000  
 252,000  
 200,000  
 163,000  
 100,000  
 199,000  
 140,000  
 163,000  
 117,000  
 50,000  
 O R

# THE THRIFTY HOUSEWIFE LOOKS BEFORE *She* BUYS!

TAKE NO CHANCES WHEN YOU BUY *Unit Heaters*

**LOOK BEFORE YOU BUY**... compare carefully is the rule of thrifty housewives. It's the rule of careful buyers of heating equipment, too. That's why you find American Blower Venturafin and Sirocco Unit Heaters in thousands of stores, offices, factories, shops, garages and warehouses. Before you buy heating equipment, ask your contractor to show you an American Blower Unit Heater or mail the coupon direct to us. We'll send a Venturafin Unit Heater for a special ten day comparison test. There's no obligation. We pay the freight both ways. Judge for yourself the merits of American Blower Unit Heaters. Don't put it off another day. Look before you buy. Buy known quality and know what you're getting. And remember, American Blower Unit Heaters compare favorably in price with other makes, yet they are the only units that give you not one, but all of the advantages shown on the right. Phone your heating contractor or mail the coupon today.

Sirocco Unit Heaters for floor, wall and ceiling installation—particularly adaptable for large areas—the result of fifty-one years' engineering experience. 107,200 to 1,267,500 B. T. U. per hr.

Venturafin Unit Heaters for floor, wall or ceiling installations in offices, stores, garages, industrials, etc. 21,000 to 471,500 B. T. U. per hr.

Venturafin Unit Heaters

Sirocco  
Unit  
Heaters

## GET THESE ADVANTAGES:

1. Quieter operation assured by streamline inlets and spring suspension motor mountings. All Venturafin units rated for sound.
2. 10 to 64% more heat, 4 to 45% more air, with no increase in horsepower. Tested under A. S. H. & V. E. standard test code.
3. Rugged heating elements with cast bronze headers insure years of dependable service.
4. Trouble-free operation with brushless type, totally enclosed, quiet operating motors.
5. New beauty of design—styled by leading industrial designers.
6. The most complete line of Units in the world to select from (two types—Venturafin and Sirocco). All units guaranteed by American Blower, a division of American Radiator and Standard Sanitary Corporation—the world's best known manufacturer of heating equipment.
7. Over 100,000 American Blower Units in use, heating more than 300 million square feet of floor space.

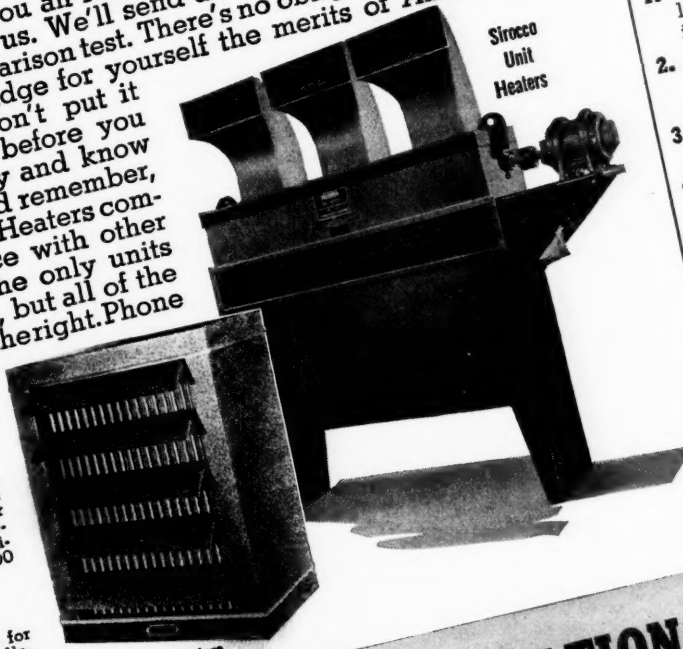
**MAKE THIS TEST**—Let us send you a Venturafin Unit Heater for a 10-day comparison test. There's no obligation. We pay the freight both ways.

☐ Please send Data on Unit Heaters.  
☐ Please send Unit Heater for comparison to:  
 NAME \_\_\_\_\_  
 ADDRESS \_\_\_\_\_  
 CITY & STATE \_\_\_\_\_

**AMERICAN BLOWER CORPORATION**  
DETROIT, MICHIGAN  
6000 RUSSELL STREET

MAKE A COMPARISON TEST

MAIL  
THIS  
COUPON





# IRON, STEEL AND METAL MARKET

**S**TEEL operations at the end of September reached the highest point since 1930. With production increased to 75 per cent of capacity compared with 50 per cent one year ago, and tonnage bookings 25 to 50 per cent more during September than in August, the steady upward activity of the past several months now reaches the point where some plants are having difficulty in making deliveries. Semi-finished steel continues scarce in several districts. There has been a shortage of certain kinds of steel, particularly sheets. Expanded requirements might mean that shipments in some lines will have to be allocated to large consumers. Some steel mills have been behind on orders and several sheet mills are said to have been unable to meet shipping requirements.

## Fourth Quarter Price Advance

This situation, of course, has tended to strengthen prices. Hot rolled annealed sheets have advanced \$2 a ton and steel wire prices increased \$3 for the fourth quarter. Wire rods were advanced \$2 a ton to \$40.50, Pittsburgh and Cleveland deliveries, and \$42.50 for larger sizes.

## Birmingham District at 64 Per Cent Capacity

Pittsburgh and Youngstown operations reached the highest point in the recovery period—Youngstown stepping up to 81 per cent, the highest in 7 years. Operations in ingot iron production in the Birmingham District have been maintained at about 64 per cent of capacity, with the prediction that the September rate will be the minimum level for the remainder of the year. Ten blast furnaces were in operation at the end of September and an additional furnace is to be brought into commission. Coal and coke operators are more optimistic and expect a 25 per cent gain in activity.

Steel fabricating shops in the Birmingham District have been fairly active on structural and other shapes for miscellaneous uses and much new business is reported in sight. Expectations are that production will rise 10 to 15 per cent in the next few months as some increase in demand for pig iron has been noted because of higher scrap prices. Scrap prices, due to increased exports are at the highest in relation to pig iron that they have been for several years.

The Birmingham & Southern Railroad, in planning an expenditure of \$1,000,000,

placed orders for 25 freight cars with the Pullman & Standard Company which is to build 200 hopper cars for the Central of Georgia Railroad. The Central has ordered 5,000 tons of rails, 250,000 tie plates, 1,600 kegs of bolts and 3,000 kegs of spikes from the Tennessee Coal, Iron & Railroad Co. which has also received a 10,000-ton order from the Atlantic Coast Line.

## Gain in Orders for Fabricated Steel Plate

New orders booked for fabricated steel plate for the eight months of 1936 amounted to 318,125 tons, about double the bookings for each of the corresponding 8 months of 1935 and 1934, and in fact are 60,000 tons greater than for the entire 12 months of last year and 76,000 tons more than in 1934. New business booked, 1,034,114 tons in the first 8 months of 1936, for the steel construction industry is about 55 per cent of normal (1928-31 average) as against 35.6 per cent for the first 8 months of 1935. Shipments are 952,344 tons, 50.9 per cent of normal, as compared with 728,145 tons for the corresponding 8 months of 1935.

## Steel Leaders Optimistic

Executives attending the steel day dinner at the Great Lakes Exposition September 17 predicted better conditions for their industry. W. A. Irvin, President of the United States Steel Corporation, said:

"The skies are brighter—business has improved—weekly earnings are better—some profits have been made within the year."

E. G. Grace, President of the Bethlehem Steel Company, speaking along the same optimistic vein, said:

"I believe that the vast industrial development is certain to continue and that our people will achieve an even higher standard of living, provided that the sound principles upon which our country has developed and grown great are continued."

With 514,700 employees on payrolls, the iron and steel industry has 10 per cent more persons employed than in 1929 and the average wage is nearly 2 cents an hour higher than in 1929.

## Lead and Zinc Activity

Persistent demand for lead was reported during September with record sales recorded for one week. Prices were \$49.51 a ton for carload lots. Domestic lead stocks are the lowest since

early in 1934 due to increased consumption and smaller output. Two large smelters were closed down in August and exports from Spain were curtailed. Domestic lead stocks, as September opened, were 218,233 tons as compared with 207,674 tons in January, 1934.

Zinc production in the Joplin District has been the largest in three months with prices holding at \$30.50 a ton for float grades and \$31.50 a ton for concentrates.

## Steel Construction Convention

The 14th annual convention of the American Institute of Steel Construction will be held October 21-23 at the Greenbrier Hotel, White Sulphur Springs, W. Va. Invitation is extended to both members and non-members to attend, for many paramount problems of the construction steel industry will be discussed in the present national emergency as well as subjects relating to new materials and methods.

## National Metal Exposition

Exhibit space for the National Metal Exposition to be held in Cleveland, Ohio, October 19-23, had to be enlarged because of demand. This industrial exposition, which has been staged and sponsored for eighteen consecutive years by the American Society for Metals, will be held at the Cleveland Public Auditorium. This year the following four societies are also cooperating: American Institute of Mining and Metallurgical Engineers, American Society of Mechanical Engineers, American Welding Society, and the Wire Association. It is announced that the technical programs of the National Metal Congress, which will be held in conjunction with the Exposition, will be the most comprehensive in history, and that exhibits of the Exposition will be the most varied.

## Building Miniature Steel Works

Marking a new approach to the use of research by industry, a miniature steel works for developing the discoveries of its research engineers will be constructed by Jones & Laughlin Steel Corporation, of Pittsburgh, Pa. The midget plant, one of the first of its kind in this country, will be equipped with actual steel-making units on a small scale capable of duplicating the operations in big mills necessary to the manufacture of iron and steel. Under the new system the Jones & Laughlin engineers will develop and test their ideas in the "pilot plant" where they will have full control of the miniature steel making equipment which will include an iron cupola, open hearth furnace, Bessemer converter, blooming mill, and various finishing devices.



## Steel on Exhibition

As a part of its Centennial Program, the City of Fort Worth, Texas, has built this magnificent coliseum for exhibition purposes and general community use. This building is 232 feet by 405 feet with a clear unobstructed width inside of 217 feet.

Wyatt C. Hedrick and Elmer G. Withers Architectural Co. of Fort Worth were associated engineers and architects.

James T. Taylor, Fort Worth, General Contractor.

Steelwork by Virginia Bridge.

## Steel Structures

OCTOBER NINETEEN THIRTY-SIX

**M**OST of the notable structures of today have been made possible and practical through Steel Construction. For Steel is the most adaptable and dependable of all structural materials. Our organization and facilities have been active in Steel Building for over forty years.

### VIRGINIA BRIDGE COMPANY

Roanoke      Birmingham      Memphis      Atlanta  
New York      Charlotte      Dallas      El Paso  
Plants at Roanoke, Birmingham, Memphis.

# VIRGINIA BRIDGE

# LUMBER NEWS

## OF THE MONTH

### Industry Holding to Higher Level of Activity

**T**HE lumber industry during September has been operating slightly above 70 per cent of 1929 production and shipments. Bookings have been steady and some advance buying was indicated because of the threatened marine labor disturbances on the Pacific Coast. For this reason the mills of the West Coast have been fairly active with orders above production.

In the Southern Pine territory, orders have been running well above the corresponding weeks of 1935, shipments being about 11 to 12 per cent above the corresponding weeks of 1935, and production running weekly between 3 per cent and 12 per cent over September 1935.

Orders on hand September 26 totaled 82,875,000 feet, equivalent to 3,946 cars while stocks on hand aggregated 342,109,000 feet, or 86 per cent of normal and 4 per cent above this time a year ago.

### Southern Hardwood Industry Meeting

**T**HE Fall Meeting of the Southern Hardwood Industry, to be held at Memphis, Tenn., November 17, is expected to draw a large attendance of lumber operators, sales managers and salesmen, mill superintendents and logging bosses. Sponsored by the Southern Hardwood Producers, Inc., New Orleans, problems of the industry will be presented and discussed, including:

- Danger of Over-Production
- The Immediate Future of Sap Gum
- Southern Oak Problems
- The Hardwood Export Situation
- Southern Hardwood Trade Promotion
- Hardwood Freight Rates
- Future Supply of Southern Hardwood
- The Robinson-Patman Law and the Southern hardwood industry.

### Forest Fires

**F**IRE has been taking its annual toll in northern and western forests. With the coming of fall the fire hazard increases in the South and particular care is urged to avoid burning the woods, reminds the Southern Pine Association. Untold damage is done to Southern timber each year. In 1934 it is estimated that timber worth \$38,481,000 was destroyed, together with small saplings and seedlings. Such losses can be practically eliminated when public indifference to woods burning can be changed to strong support for forest fire control. Fully 94½ per cent of the forest fires in the South is caused by the public while only 1.7 per cent is caused by lumbering.

### Pole and Pile Timber and Pine Stumpwood

**F**OREST survey releases of the Southern Forest Experiment Station, New Orleans, furnish new data on the supply of pole and pile timber and longleaf stumpwood in four Southeastern Survey Units. They comprise 20,360,000 acres in forests in South Carolina, Georgia, and Florida. The stumpwood supply, used in the manufacture of wood turpentine, wood rosin, rosin oils, and other products, is estimated at 20,967,000 tons, and there are about 78,000,000 trees of potential pole and pile timber ranging in diameter from 7 inches to 18.9 inches, and in merchantable lengths from 20 feet to over 55 feet.

The area is well served by railroads, with inland and coastwise water transportation feasible. Paved, improved and good county roads reach practically the entire region.

Wood products industries can secure raw materials in abundance. Commercial wood preserving plants are now located within the area, at Savannah, Brunswick and Jacksonville. Nearby plants draw a part of their supplies from the same region including those at Charleston and Spartanburg, S. C.; Augusta and Atlanta, Ga.; Birmingham, Montgomery, Brewton and Mobile, Ala.; Pensacola, Fla., and Chattanooga, Tenn. Railroad creosoting plants are located at Macon, Ga., Gainesville and Hull, Fla.

### Low Cost Homes

**D**EMONSTRATION houses erected at a cost of \$500 a room, by the National Lumber Manufacturers Association, to show low-cost residential possibilities with standard materials and construction methods, have been completed at Bethesda, Md., a suburb of Washington. The houses selected for this demonstration are a 4-room bungalow, a 4-room 2-story house and a 6-room 2-story house.

All steps of construction and financing have followed regular building routine, according to Dr. Wilson Compton, Secretary and Manager of the National Lumber Manufacturers Association. The results show that single houses of standard lumber frame construction, properly designed, can be built at low cost, even in the high-cost area of Washington, although not generally realized in plans for standardized mass production houses.

The fact that the houses are of high quality and good appearance, serviced by gas, electricity, water and sewers, and have a complete basement and heating plant, and can be sold at prices which average no more than \$550 down and \$25 per month to carry, including gradual retirement of principal, is of interest to the public.

### Reforestation 1,000,000 Acres in Mississippi

**T**HE Masonite Corporation, manufacturers of pressed wood products, is directing the work of reforesting more than 1,000,000 acres adjacent to its plant in Laurel, Miss.

The program provides for the planting of about 300,000 new trees per year, the education of 300 timber land owners in forest management and community education in forest fire fighting and fire prevention.

An agreement between the corporation and the Mississippi Forestry Commission, Governor Hugh L. White chairman, provides that the State will pay one third the cost of the project, the corporation paying for the remainder. It is probably the first time a large wood pulp-using manufacturer has undertaken forestry work on the lands of private individuals. The owners are being supplied with all materials and trees without cost.

Mr. Alexander said his company's supply of pulpwood is assured for years to come, but they feel a certain obligation to aid in a more intensive development of the forest lands, not only for pulpwood, but for poles, piling, lumber, naval stores, veneer and other products that may produce higher values to land owners.

According to the Southern Forest Experiment Station, there are 53,000,000 cords of pine pulpwood and 30,000,000 cords of hardwood pulpwood now standing on 14,000,000 acres of Mississippi timberland.

Many Southern companies have been improving their privately owned forests. Some 28 mills in 11 Southern States are on a sustained yield basis. They control about 3,874,000 acres and produce about 20 per cent of the total output. Companies which have been giving special attention to reforestation are W. T. Smith Lumber Co., Chapman, Ala.; Brooks-Scanlon Company, Foley, Fla.; Great Southern Lumber Company, Bogalusa, La.; Southern Pine Lumber Company, Diboll, Tex.; the Southern Railway, and the International Agricultural Corporation, Tampa, Fla.

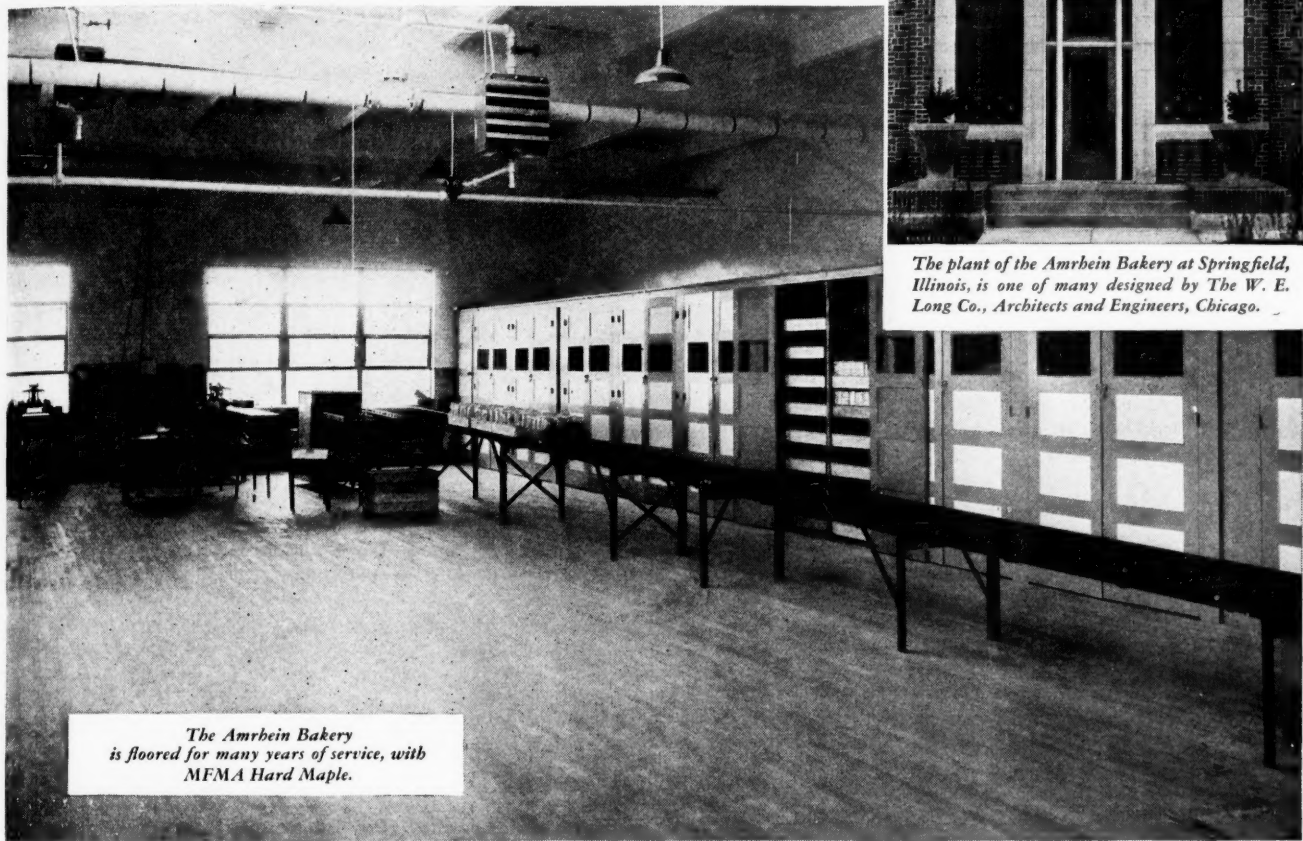
### Demand for Timber Tracts

**D**EMAND is increasing for large timber tracts, hardwoods in particular, reports S. P. Long, Chattanooga, Tenn. He states that interests are seeking acreages in Kentucky and large tracts closer to Chattanooga. Oak and poplar are wanted by flooring and barrel stave manufacturers. During the past few months there has been an increase in the number of inquiries for both mineral and timber lands.

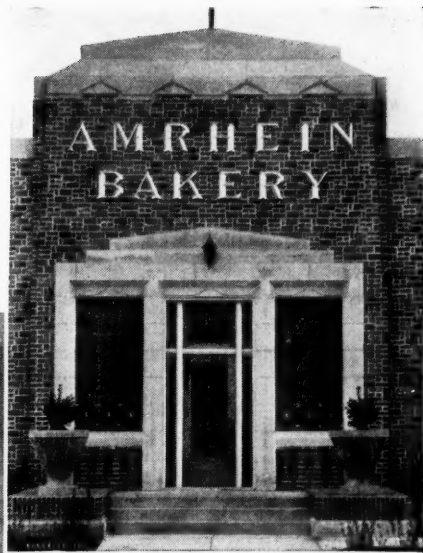


# "THE ONLY FLOORING THAT WILL STAND UP UNDER ALL BAKERY REQUIREMENTS"...

*Says The W. E. Long Co., Architects and Engineers*



*The Amrhein Bakery  
is floored for many years of service, with  
MFMA Hard Maple.*



*The plant of the Amrhein Bakery at Springfield,  
Illinois, is one of many designed by The W. E.  
Long Co., Architects and Engineers, Chicago.*

**T**HE W. E. Long Co. explains *why* in these words: "A bakery floor must be sanitary—easy to clean—comfortable for the operators in the plant—resistant to the wear and tear of the casters used on bread racks, dough troughs and pan trucks—and must always be neat in appearance. During fifteen years' experience in designing, building and operation of bakeries, we find that Northern Hard Maple is the only flooring that will stand up under all bakery requirements.

"We specify 'MFMA Maple Flooring,' knowing that our clients are assured of getting not only stock that is standard in quality and millwork, but all Hard Maple.

"MFMA Hard Maple flooring was selected for the Amrhein Bakery of Springfield, Illinois, because it is the only flooring material that will meet every bakery requirement, including the tremendous amount of trucking. In planning bakeries, we arrange direction of the flooring strips without regard to direction of traffic.

"For these reasons," says The W. E. Long Co., "Hard Maple flooring is a *standard specification* with us for bakery floors."

You profit in many ways when you floor with Northern Hard Maple. You get maximum years of service, because its tough fibre and tight grain so effectively resist abrasion—will not splinter, splinter or develop ridges. You also lower main-

tenance costs because smooth Hard Maple can be cleaned by brushing alone—and you simplify plant alterations.

You aid sanitation, for Hard Maple creates no dust, offers no hiding places for germ-laden dirt. You increase workers' efficiency, for Hard Maple's warm, dry resilience reduces fatigue and discomfort. Throughout many, many years of service, each year adds to your profit for having selected MFMA\* Northern Hard Maple.

Hard Maple may be laid in strips or blocks—with or without pattern—over wood or concrete sub-floors, or over your present floors. Write for a helpful booklet which gives grading rules and complete specifications for laying and finishing MFMA\* Maple Floors.

## MAPLE FLOORING MANUFACTURERS ASSOCIATION

1797 McCormick Building, Chicago, Ill.

See our catalog data in Sweet's, Sec. 15/53. Our service and research department will gladly assist you with your flooring problems. Write us.

# Floor with Maple

**Use the new, penetrating, heavy-duty finishes. They seal the surface—keep out dirt—resist soil stains—eliminate costly scrubbing. Non-slippery. Will not mar, scratch or flake off. Can be renewed without removing old finish. Write for complete information.**

\*The letters **MFMA** on Maple, Beech or Birch Flooring signify that the flooring is standardized and guaranteed by the Maple Flooring Manufacturers Association, whose members must attain and maintain the highest standards of manufacture and adhere to manufacturing and grading rules which economically conserve these remarkable woods. This trade-mark is for your protection. Look for it on the flooring you use. **MFMA**



# GOOD ROADS AND MOTOR TRANSPORT

## Road Builders Look South

**\$182,402,000 ROAD CONTRACTS LET IN FIRST NINE MONTHS 1936, LARGEST TOTAL SINCE 1931 — NATIONAL ROAD CONVENTION AT NEW ORLEANS IN JANUARY TO CENTER ATTENTION ON SOUTHERN HIGHWAY ACTIVITY**

**R**OAD builders, materials and equipment interests of the nation are invited to attend the 1937 Convention and Exhibit of the American Road Builders' Association to be held at New Orleans, the week of January 11. This meeting is the first to be held in the South under the Association's sponsorship. It is to be made of outstanding importance, according to Charles M. Upham, engineer-director of the American Road Builders' Association.

With the Federal-aid construction program for the next two years emphasizing secondary and farm-to-market road construction and maintenance, this subject will be of paramount interest to the South as well as to builders and machinery makers. The South will share largely in the Federal appropriations.

Of the South's 1,141,000 miles of roads, one of the greatest needs is for building and improving secondary and farm-to-market roads. Main highways under state control throughout most of the Southern States are of the better types of construction, but there remains much work to be done. Only 41,000 miles are of high type paving out of the 262,000 miles of state roads. While more than \$350,000,000 annually have been spent during the depression period for Southern highways, bridges and streets, with increasing motor transportation demand calling for better types of road construction, stronger bridges, wider and safer highways and streets, the construction volume in the next several years will tax the road builders of the nation.

Much work is under way in the South as indicated by the fact that road construction contracts awarded for the first nine months of 1936 amount to more than \$182,000,000, based on reports of the DAILY CONSTRUCTION BULLETIN. This is the largest total since 1931.

As the milder winter climate of the South affords year-round construction activity those attending the national road builders convention in mid-winter at New Orleans will have an opportunity to study at first hand, methods, practices and working conditions.

## Bridge Building

**T**HE weakest links in most State highway systems are their bridges, although great advancement has been made in their construction in recent years. New and stronger bridges have been erected.

Chairman Shirley, of the State Highway Commission of Virginia, estimates that in his State alone approximately \$33,000,000 should be spent on modernization of the highway bridge system. Approximately \$11,000,000 could be spent on bridge replacements in the primary system and twice that amount on replacements and improvements of bridges on the 40,000 miles of secondary road system of the State.

The Mississippi River south of Memphis is witnessing an era of bridge building. There will soon be three great spans for motor vehicles across the Mississippi River.

## Promoting Highway Safety

**T**HE appointment of Dr. H. E. Tabler, chairman of the Maryland Roads Commission, as chairman of the Committee on Safe Highways which is being organized by the Association, is announced by Charles M. Upham, engineer-director of the American Road Builders' Association, Washington, D. C. Governors of all States are expected to become honorary members or to designate personal representatives, while advisory members will include heads or representatives of all national organizations interested in highway safety.

The organization of the Committee is declared to be the first national effort undertaken for the elimination of motor vehicle traffic hazards due to improper and inadequate highway construction. The Committee will make its first report at the 1937 Convention and Exhibit of the American Road Builders' Association in New Orleans during the week of next January 11.

## Buying More Buses

**O**RDERS and deliveries of new motor buses in the South have been increasing in recent weeks. Some of these installations are cited in the following:

The Motor Transit Co., Jacksonville, Fla., is replacing the last of its trolley cars now in service with 16 new 23-passenger Twin Coaches which will give it a fleet of 85 buses, including 76 Twin Coaches, 6 Indianas and 3 Reos. The Dunn Bus Service of Miami which operates 200 buses, purchased 25 new modern type Mack buses at a cost of \$175,000. The Dixie Greyhound Lines installed on its Memphis, Nashville and Chattanooga routes, 10 new super coaches made by General Motors. The Mercer County, W. Va., School Board, Bluefield, purchased a fleet of 17 GMC buses said to be the second largest single order for school buses.

## \$4,084,000 For Road Maintenance in Florida

**Operates 379 Trucks and 271 Road Machines**

**F**LORIDA is spending over \$4,084,000 for road maintenance in 1936.

Keeping Florida's roads in condition for its 356,244 registered motor vehicles and for the thousands of out-of-state cars that annually come to the peninsula has during the first six months of this year cost \$1,839,579, announces L. K. Cannon, assistant engineer of the State Road Department at Tallahassee. Routine maintenance took \$859,563, and betterments and storm damage repairs, \$980,016.

Expenditures this year for additions and replacements of equipment for carrying out the work have amounted to \$115,000.

A fleet of 379 trucks is operated. Of these 207 are a special combination cargo body and hydraulic dump type of one-and-a-half tons capacity and 159 are of the same size but of the steel hydraulic body type. There are also six 8-ton trucks. Three 3-ton units are used for asphalt distributors. Makes of the various vehicles and number of each are:

Chevrolet, 151	G. M. C., 5
Dodge, 16	International, 14
Federal, 11	Mack, 3
Fords, 164	Reo, 15

Other machines making up the Florida road maintenance plant number 271. This includes 87 tractors, 42 graders, 21 rollers, 63 heaters, 11 patrols, 8 draglines, 2 shovels, 2 mixers, 8 hoist and engine units, 4 compressors and 23 horse-drawn mowers. The number of units of each manufacture are:

<b>Tractors</b>	
Allis-Chalmers, 10	Fordson, 18
Silver King, 3	Taylor & Munnell, 4
International, 13	John Deere, 3
McCormick-Deering, 11	Cletrac, 1
Case, 3	Caterpillar, 21
<b>Graders</b>	
Ryan, 1	Austin, 6
Adams, 33	Russell, 2
<b>Rollers</b>	
Buffalo, 7	Galion, 6
Austin, 3	Fordson, 2
Tandem, 2	Acme, 1
<b>Asphalt Heaters</b>	
Littleford, 63	
<b>Patrols</b>	
Austin, 2	Galion, 1
Adams, 2	Caterpillar, 5
Allis-Chalmers, 1	
<b>Draglines</b>	
P. & H., 3	Northwest, 4
Lorain, 1	
<b>Shovels</b>	
Marlion (steam), 1	Michigan, 1
<b>Mixers</b>	
Jaeger, 2	
<b>Compressors</b>	
Ingersoll-Rand, 4	
<b>Hoists and Engines</b>	
Novo, 2	McKiernan-Terry, 1
LeRoi, 2	National, 1
Hercules, 1	Construction, 1



## A "TAILOR-MADE" ROAD SYSTEM FOR THE SOUTH

### STABILIZATION . . . GREATEST CONTRI- BUTION IN 20 YEARS TO LOW COST ROAD BUILDING!

Not a costly undertaking, stabilized local soils roads are "made-to-order" for the South. No other type of modern, low-cost secondary road construction is so well adapted to building more miles of dustless, better riding secondary roads for the same number of dollars spent. In fact, in the end, it is much less expensive to build roads of this type than to constantly put dollar after dollar into roads that wash away with every rainfall—blow away with every wind.

Roads stabilized and treated with Solvay Calcium Chloride are inexpen-

sive to construct simply because they are built with materials present in practically any community . . . because they make use of local labor and ordinary equipment.

Not only does stabilization keep maintenance as well as construction costs at a minimum, it provides a wearing mat which can serve as an excellent foundation for higher types of surfaces when traffic or budgets war-

rant. Without cost or obligation, write for the new, fifth editions Solvay Technical Bulletins Nos. 1 and 3 on Road Surface Stabilization.

### SOLVAY SALES CORPORATION

*Alkalies and Chemical Products Manufactured by  
The Solvay Process Company*

40 RECTOR STREET NEW YORK

#### BRANCH SALES OFFICES:

Boston	Cleveland	Indianapolis	Philadelphia
Charlotte	Detroit	Kansas City	Pittsburgh
Chicago	Houston	New York	St. Louis
Cincinnati			Syracuse



**SOLVAY**  
TRADE MARK REG. U. S. PAT. OFF.  
**Calcium Chloride**

### TO END DUST!

Solvay Calcium Chloride also provides the clean, easy, inexpensive way to end dust. It can be applied by anyone to tennis courts, driveways, private roadways, athletic fields, school yards, playgrounds, tourist camps, parking car lots, race tracks, etc. Write immediately for latest booklet "To End Dust."

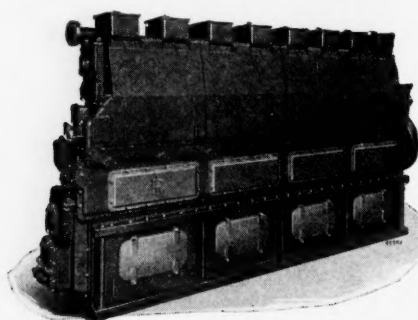


# EQUIPMENT

## NEW AND IMPROVED

### Improved Diesel Engine

Ingersoll-Rand Company, New York City, has announced its Type S Diesel Engine, a unit of improved design and thoroughly modern in all details. It is of the vertical, four-cycle, single-acting, solid-injection type designed to run at medium speeds and built for heavy-duty, continuous service. Fundamentally, it is similar in design to the Ingersoll-Rand



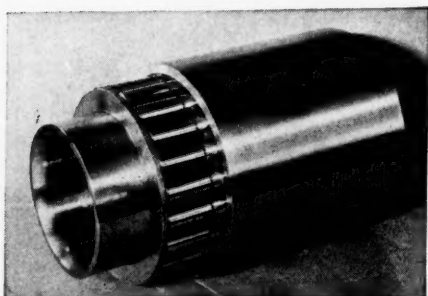
Type S Ingersoll-Rand Diesel

locomotive engine, of which there are more than 140 in operation, some in service for over 12 years. The Type S engines are made with 3, 4, 5, 6 and 8 cylinders for ratings from 150 to 460 horsepower. They are described in a 24-page bulletin issued by the company.

### Fafnir Introduces Extended Range of Bearings

With a rated capacity from 10,000 to 500,000 pounds, depending upon size, speed and loading conditions, a complete series of heavy-duty industrial roller bearings have been introduced by The Fafnir Bearing Company, New Britain, Conn. These bearings are made in an extended range of almost 100 sizes and are said to meet fully the severe service requirements of paper mills, steel mills, and other heavy metal-working machinery, rubber and oil field equipment, etc. In the widened range of sizes, rollers of  $\frac{3}{4}$ -inch,  $1\frac{1}{4}$ -inch, and  $1\frac{1}{2}$ -inch in diameter have been utilized, in addition to the  $1\frac{1}{16}$ -inch diameter used in bearings previously available. A choice of 18 different bores is offered. A feature of these bearings is the large number of solid rolls incorporated in the cage assembly, making for increased load capacity.

Fafnir Heavy Duty Roller Bearing

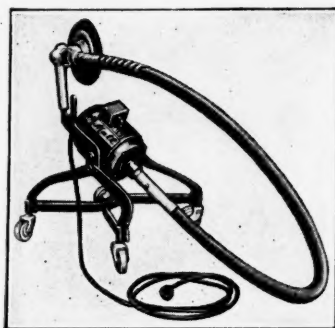


### Edwards Twin (2 in 1) Metal Shingle

In line with its policy to keep pace with the trend in roof covering, The Edwards Manufacturing Company, Cincinnati, Ohio, has introduced a new product—the Edwards Twin (2 in 1) Metal Shingle—which is said to be very economical to apply while presenting a beautiful appearance and making a positive covering. The shingle is made of copper-bearing steel and galvanized open hearth steel, and is 16 by 20 inches in size.

### Mall Utility Grinder and Polisher

The Mall Tool Company, Chicago, Ill., announces a new and improved mounting with the Mall Power-Flex utility grinder and polisher, which is lower and wider, all-steel, and equipped with larger, easy rolling casters. The Power-Flex has a  $\frac{1}{2}$  horsepower ball bearing motor, capable of delivering 100 per cent additional horsepower on momentary overloads. With a flexible shaft  $\frac{7}{16}$  inch in diameter, 6 feet long, and all angle and



Mall Power-Flex Grinder and Polisher

straight spindles full ball bearing mounted, the unit is a multiple purpose machine, ideal for removing excess metal after welding, polishing, buffing, sanding, drilling and for general maintenance work. Descriptive literature on this and other Mall grinders may be had from the company.

### JA-45 "Jackhammer"

Enabling users to get up to a third more drilling from their present equipment is claimed for a new "Jackhammer" introduced by Ingersoll-Rand Company, Phillipsburg, N. J., and New York City. If a portable compressor, for example, is now operating two 55-pound drills, three of the JA-45 "Jackhammers" may be substituted, it is said, resulting in an increase of  $\frac{1}{3}$  in drilling. The JA-45 weighs about 45 pounds and is about 21 inches long. It is available in dry, wet and blower styles. Copies of Bulletin No. 2266, describing the unit, may be obtained from the company's office at 11 Broadway, New York.

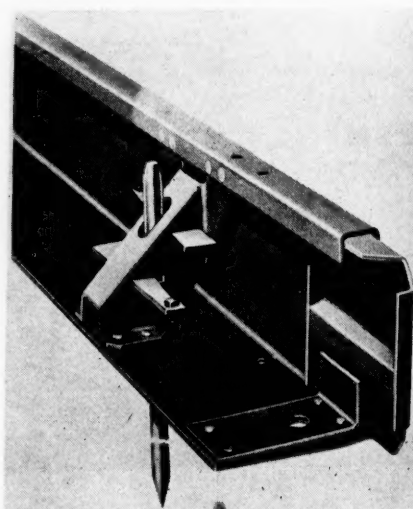
### New Feature in Sanding and Finishing

After three years of experimental work, the Sterling Products Company, Detroit, Mich., announces an electric sanding and rubbing machine of reciprocating action, which is intended as a companion to the air machine manufactured by this company. Driven by an electric motor through a flexible shaft, the sanding action is reciprocal with five-eighths of an inch travel of the sanding pad, at speeds from 1750 to 2800 complete oscillations per minute, depending upon the type of work to be done. An exclusive patented feature of the machine is the "floating" principle as applied to the construction of the block. The unit is portable and may be operated on either 110 or 220 volts. Three types of mountings are provided.

### Self-Aligning Road Form

In the design and construction of a new self-aligning road form introduced by Blaw-Knox Company, Pittsburgh, Pa., the self-aligning feature is accomplished with two wedges on each of the stake pockets. The upper wedge is operated by hand until it contacts the stakes, thus taking up the usual clearance between the wedge and the stake, and eliminating the movement of the form when the final locking is done. The lower wedge is then driven up with a hammer for final locking. This prevents movement of the form from line or grade and permits quick and accurate form setting, even though the stakes be bent or driven crookedly.

Form with Wedges in Place





# Barrett ROOFS

*Prominent among the Barrett-roofed buildings that distinguish Birmingham's business section are the following:*

Alabama Power Building  
Birmingham Electric  
Comer Building  
Empire Building  
Jackson Building  
Louis Pizitz Dry Goods Company  
Masonic Temple  
Protective Life Building  
Redmont Hotel  
Southern Bell Telephone and Telegraph  
Tutwiler Hotel  
U. S. Post Office  
Watts Building  
Webb-Crawford Building

*...and many others, including the Steiner Building, whose Barrett Roof has been giving continuous, expense-free service for 48 years.*

## THE TECHNICAL SERVICE BUREAU

of The Barrett Company invites your consultation with its technically trained staff, without cost or obligation. Address The Technical Service Bureau, The Barrett Company, 40 Rector Street, New York.

## THE BARRETT COMPANY, 40 RECTOR STREET, NEW YORK, N. Y.

2800 So. Sacramento Avenue, Chicago, Illinois

Birmingham, Alabama

## Birmingham's finest buildings are protected with Barrett Roofs

Birmingham, Alabama. In 1870, a cotton field at the junction of two railways; today, one of America's great cities—the coal and iron center of the South.

The architects, engineers and business men, who have contributed in the spectacular growth of this Southern city, have shown marked preference for Barrett Roof construction. They know that these famous roofs give maximum protection at the lowest cost per year of service.

Bonded for 20 years by the United States Fidelity and Guaranty Company against repair and maintenance expense, Barrett Specification Roofs regularly outlive their bonded periods by 10, 20, 30 years or more. They are applied by Barrett Approved Roofers, and carry Fire Underwriters' Class A rating.

Whether you have a new building to roof or an old one to reroof, consult with us or your local Barrett Approved Roofer.

*Do not pass up  
this opportunity!*

**SECURE YOUR  
INDUSTRIAL PLANT LOCATION NOW  
ON THE ATLANTIC SEABOARD**

**MOVEMENTS ARE now under way that, it is believed, will encourage peace and increase commerce with foreign countries; a result that is expected from the currency stabilization plans now being effected.**

**By selecting Glenburnie for your new or branch plant, you will be correctly located for new or assembled products for coast-wise, foreign and South American trade.**

**Most every factor that enters into a decision on plant location favors Glenburnie.**

**Relocations are already under way!**

**Some centrally located plants have determined on new locations. Others are being considered; it is not wise to delay until the very choice locations are gone. Decisions of this nature take time.**

*In addition to the usual economic advantages, Glenburnie offers unusual accommodations for employees and their families. Two world renowned cities are within a short distance—Washington and Baltimore with old historic Annapolis and the U. S. Naval Academy a matter of a few minutes. The Chesapeake Bay gives a marvelous protected outlet to the Atlantic for trade and travel.*

**Here is an unusual offering and we want you to write us for more details than we can give you here.**

**GLENBURNIE DEVELOPMENT CO.  
WASHINGTON, D. C**

**GEORGE B. FURMAN, President  
1409 L Street, N. W.**

## **FINANCIAL NEWS**

### **Outstanding Chance for Industry**

**S**OUTHERN papers are urging bankers of the South to unite in finding a way to provide money for a Southern newsprint industry. The Winston-Salem Journal calls attention to the fact that newsprint can be made from Southern pine and delivered to the consumer for from \$10 to \$12 per ton less than Canadian paper mills now charge. The United States is now sending out of the country \$170,000,000 annually for newsprint.

Here is a great industry, to employ thousands of workers, that can be promoted in the Southern states, because the South has the raw material in its pine trees and cut-over lands to provide for the needs of the whole United States at a tremendous saving in expenditure. It would seem that some way should be found whereby it would not be necessary to depend upon money advanced by the North to promote this needed profitable Southern enterprise. Some of the mills being built for pulp and liner board, used in cartons and boxes, by a comparatively small investment could be producing newsprint also.

### **Loans by Banks**

**F**EDERAL RESERVE reports indicate that commercial, agricultural and industrial loans made by member banks of the System increased in the last year more than \$527 million, and have now reached the total of nearly \$4 billion.

As a barometer of business, the rise or decline in number and amount of commercial loans is closely scanned. Complaint of bankers for several years has been the absence of such loans. The larger institutions, with vast accumulations of deposits, have been eager in their search over the country for desirable commercial paper. An important question is how to bring about a fuller use of bank deposits which, to too large an extent, have remained idle except for the outlet afforded by government securities.

The Economic Policy Commission of the American Bankers Association, headed by Col. Leonard P. Ayres, reported to the American Bankers Convention last month that commercial banks must be prepared to regard the lowered relative level of commercial loans and the large employment of banking funds in investments as more than a temporary condition. The report stated that investments now represent about 60 per cent of earnings assets. Prior to depression commercial loans ran from 40 to 50 per cent of earning assets.

### **An Outstanding Railroad**

**T**HE Norfolk & Western Railway is an outstandingly successful railroad. It has been a consistent earner through the period of the depression, meeting its dividend payments regularly and adding to its surplus.

For the eight months ending August 31, a recent report shows an increase of \$5,695,000 net income over the like period of 1935. There was a gain of \$9,797,000 in eight months of this year in net operating revenues over 1935. In the meanwhile, the proportion of operating expenses to operating revenues have been reduced from 60.72 per cent during the first eight months of 1935 to 54.22 per cent this year.

*(Continued on page 58)*



## ON OUR SYSTEM

### THEY HANG UP THE SHOVEL

A fireman dips into your capital with a shovel. His intentions may be good, his judgment bad.

### NATURAL GAS

makes it possible to have temperatures, furnace atmospheres, or steam generation automatically controlled. The installation and operating costs are low.

CONSULT YOUR LOCAL GAS COMPANY

or write us

**SOUTHERN NATURAL GAS COMPANY**

Watts Building

Birmingham, Ala.



#### DRAWING MATERIALS

Drawing Instruments, Slide Rules, Planimeters, Drawing and Tracing Papers, Drafting Room Furniture, Surveying Instruments, Tapes.

##### PIGMENT Waterproof Drawing Ink

Catalogue sent on request.

*Inquiries solicited.*

**F. WEBER CO.**

Est. 1853

227 PARK AVENUE

BALTIMORE, MD.

FOR ATTRACTIVE BUILDINGS AND MAUSOLEUMS

#### USE BLUE "OGLESBY" GRANITE

*It Assures Greater Permanence—Unusual Beauty  
Reasonable Cost*

FOR BUILDINGS  
CUT-ASHLAR RUBBLE

FOR MONUMENTS—  
MARKERS—MAUSOLEUMS

Quarried by—

**OGLESBY GRANITE QUARRIERS, ELBERTON, GA.**

*"Preferred for Better Memorials since 1893."*

#### THE STAGE IS BEING SET

America is preparing for a notable industrial advance. Is your business prepared to take advantage of it?



*Correspondence invited*

#### BALTIMORE COMMERCIAL BANK

GWYNN CROWTHER, President

BALTIMORE, MARYLAND

Member Federal Reserve System—Member Federal Deposit Insurance Corporation

## BETTER

An outward and visible sign . . . the trade-mark pictured below . . . tells the world that ACI Quality Coals are better.

There is better quality, better service, better value in these high volatile products from the ACI mines in Kentucky, Tennessee, Virginia, and West Virginia. Power plant engineers rightfully call ACI Quality Coals the finest bituminous coals in the world. Domestic consumers also attest to this fact.

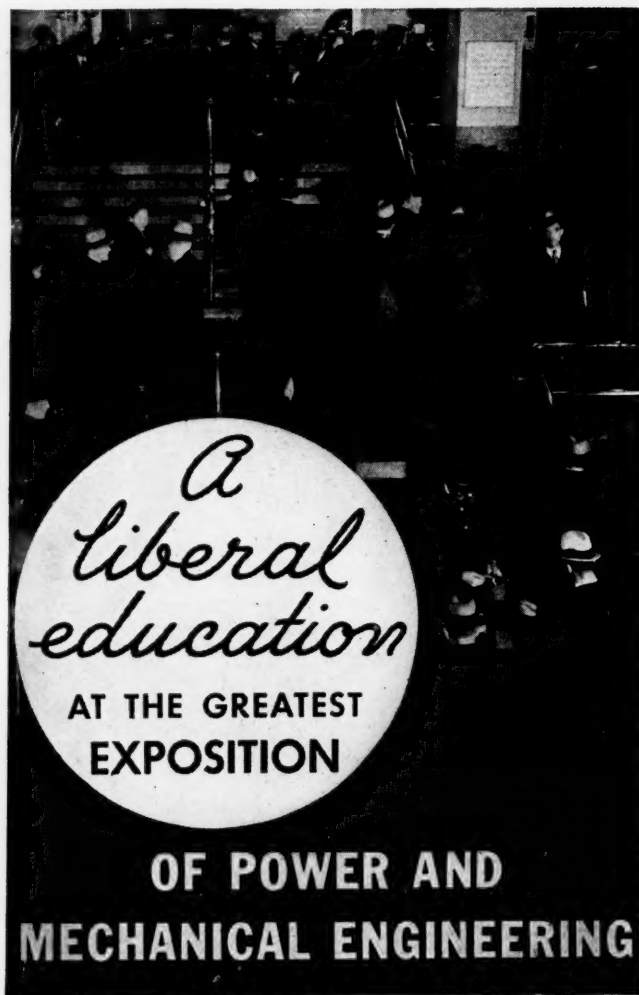
The ACI trade-mark is a pledge of better quality, better service, better value. ACI Quality Coals are available from the agents listed in "Where to Buy ACI Coals." Write for your copy today.



#### APPALACHIAN COALS, INC.

TRANSPORTATION BUILDING

CINCINNATI, OHIO



## FOR INDUSTRIAL ENGINEERS AND EXECUTIVES

There has been no National Exposition of Power and Mechanical Engineering since 1934. The changes since then in methods, materials and equipment for the production, transmission and application of power have been devastating to prior ideas. Further changes due in the next two years can be largely foreseen and forestalled by a study of today's most advanced ideas as embodied in exhibits at this year's National Power Show. To see and study these exhibits is a liberal education.

Remember—after this show, not again until 1938 will there be an opportunity to get thoroughly up-to-date in one short week. Once you lose touch, it's hard to catch up. It's much easier to acquire an intimate knowledge of modern equipment by visiting this greatest Power Show of a decade or more. Registered attendance is expected to exceed 40,000. Arrange now to come and bring your associates.



**12<sup>th</sup> NATIONAL EXPOSITION OF  
POWER AND MECHANICAL ENGINEERING**  
November 30 - December 5, 1936  
Grand Central Palace, New York

MANAGEMENT, INTERNATIONAL EXPOSITION CO. 6425

## Financial News

(Continued from page 56)

### Government in Real Estate

**I**T is reported that the Farm Credit Administration has taken possession of more than 31,000 farms, and predictions from Congressional Committeemen indicate that the list will grow until a very large proportion of the farms on which mortgage loans were advanced, will be in distress. This is a gloomy outlook.

There have been 109,000 foreclosures of all types of property in various communities since the turn of the year.

### Promised Budget Balance

**T**HE President in a speech at Pittsburgh October 1, expressed the hope that if present national income continues to rise, "the receipts of government, without imposing any additional taxation, will within a year or two be sufficient to balance the budget."

Whatever may be the result of the election, this should be the first and continued thought of the incoming administration.

The business interests of America are straining to go ahead. The assurance of government living within its income will bring comfort to investors as nothing else will. The absence of that assurance has piled up in banks money that should be used in promoting enterprise. A balanced budget means a confident outlook.

### Stabilization

**T**HE action of the government in promising cooperation with England and France in stabilizing the franc, met with the favor of banks and business interests when it was first announced, and probably still does in the majority of cases. Questions are being asked however, and all of them are not coming from one source. Fear is expressed that we are being used as a cat's paw by other countries to their advantage. Some of the questions seemingly have no relation to the matter.

To the layman it would seem that the three countries can promote in this way a freer interchange of products without making any startling changes in tariffs. This is apparent if one considers that the franc, having a different value in England and France from its value in America, and the dollar having a different value in France from its value in England injects constant confusion in the course of trade.

Stabilization of currencies was the objective of the Economic Conference in London in 1933.

### Virginia Bonds

**T**HE Old Dominion sold \$10,000,000 worth of bonds last month at an interest rate of \$2.17. Even in a low rate money market the price obtained is evidence of the credit standing of Virginia.

### An Aid to Earnings

**A**S the prediction is that cheap money rates will prevail for some time to come, more and more securities to refund previous debts are presented to the public. To meet increasing taxes and higher wage rates, it would seem to be the part of wisdom for corporations, whose statements justify it in the value of their property and earnings, to take advantage of present conditions.

MANUFACTURERS RECORD FOR

# Recovery *and the* Power Industry

"If the utility industry knew that it could reach a reasonable compromise with the Government by which the death sentence of the Wheeler-Rayburn bill could be repealed and constructive regulation of the industry substituted and the invasion and duplication of its systems directly and indirectly by its own Government could be removed, it could double its capital expenditures tomorrow.

"It could begin a program which would put thousands of men in this country back to work, largely in the manufacture of durable goods and construction work, where all economists agree lies the necessity for activity in order to produce the return to economic prosperity."

*From a statement made on May 1, 1935 by Wendell L. Willkie,  
President of THE COMMONWEALTH & SOUTHERN CORPORATION*

IT has become more and more evident that business recovery must come from the efforts of business itself. The power industry, if it were permitted to plan intelligently for the future, could greatly increase its capital expenditures, thus giving a strong impulse to the construction and capital goods industries.

This company, for example, which in its gas and electric business has no intermediate holding companies and makes no profit on supervision, financing, engineering or any other service achieved results in 1935 which, in the absence of government interference and competition, would justify an important expansion program.

At the close of 1935, our operating companies served 935,305 residential electric customers, who consumed 14.21% more electricity on the average than in 1934. They, together with 241,345 residential gas customers, bought from the companies, mostly on generous credit terms, over \$14,000,000 worth of appliances, a new high record. Helped by the Objective Rate Plan, devised by our company in 1932, the average residential electric rate in the territory served by our operating companies declined from 5.19¢ in 1932 to 3.96¢ in 1935, and for the year ended July 31, 1936, 3.70¢. In the year 1935, the average residential rate per kilowatt hour of the Commonwealth & Southern group was 21.3% lower than the national average and the average consumption per residential customer was 21.9% above the national average. The rates of our companies, in each of the 11 states in which they operate, are lower by a wide margin than the average for the state.

## ***The* COMMONWEALTH & SOUTHERN CORPORATION**

MICHIGAN — OHIO — ILLINOIS — INDIANA — PENN-  
SYLVANIA — GEORGIA — FLORIDA — MISSISSIPPI  
SOUTH CAROLINA — ALABAMA — TENNESSEE





# SMILES and FROWNS



## A Critic's Letter

Altavista, Va.

Editor, MANUFACTURERS RECORD:

The outside of your magazine is what BIG BUSINESS pays for, and the inside showing wonderful progress in all business lines is what the subscriber pays for.

When it comes to SPOUTING—HOT and COLD from the same HORN—you have the world beat. I congratulate you.

E. Cundiff.

## The Reply

Dear Sir:

The publisher is not worth his salt who does not welcome criticism from those who subscribe to his paper and who do him the honor to read what he writes.

There are two sides to every question, and honest differences of opinion have, in this country, usually led to constructive results. So much for that.

The front cover article taken from our September number, which you attached to your letter, is not paid for by anybody as you suggest, but is our own opinion of the way Government, as now conducted, is leading the country. We have never hesitated to freely express our views for and against any policy of government or industry that affects the welfare or the economic life of the country.

We have opposed the New Deal policies in many instances because we are firmly convinced they cannot be adopted by America and continue the form of Democratic government which has made our progress what it has been in the last 150 years. We deny the right of government to compete, as it has done, with private interests. We maintain that national government steps aside from its proper function when it crosses state lines and undertakes to administer affairs which should be and always have been handled by the separate states.

In our news columns we report, as we should and will continue to do, the progress being made out of the depression. It is clear that the billions which have been put into circulation must have the effect of stimulating buying and producing activity. Maybe the country in years to come can pay the bill for all of this out of abundant prosperity. We hope so. But you will agree with us that the bill will be a huge one.

Evidently you believe that the course has been right and we do not. Time will tell, but we are sincere in saying that we want your expressions at any time and your criticisms about our work.

Editor, MANUFACTURERS RECORD.

## Improvement Despite Administration Mistakes

WEST VIRGINIA LIME COMPANY

Roanoke, Va.

Editor MANUFACTURERS RECORD:

Your paper presents a queer mixture of appreciation for the success of the New Deal and at the same time a denunciation of its policies. Your editorial columns and cover page are one whine after another about how terrible things

are and your news columns show increasing advances in all lines of industry. Other trade papers continually point to healthy conditions and many corporations for the first time in years are getting out of the red.

Of course, there will be more taxes, but who would not rather pay more taxes and have their business go ahead in preference to have it stagnate and not be able to meet payrolls and overhead expenses that cannot be shut off even when a plant is idle. If we had continued much further with such do nothing policies as preceded our present Administration many corporations could not have even started up again. Now they are getting their feet on solid ground and looking about for a little black ink, and such issues as your September number does not seem to register a sound policy and fails utterly to convince the people in business that they are following a myth. The ledgers over the country are telling a different story and my advice to your editorial staff is to take stock of the thoughts in the minds of your readers and remember that all of your subscribers are not Liberty Leaguers. For a while at least I imagine that most people will be glad enough to make sufficient money so they can pay taxes again. Personally I hope that my tax is quite large, and that is more than it has been for some years.

Broaden your outlook and remember that most of your readers are doing better now. The New Deal has made many mistakes, of course, but it has brought about better times and most people are thankful enough to pay for them.

Please, for your own sake and ours do not begrudge our better conditions and above all do not get the flavor of the spirit of poor old Al Smith who has made himself a very sad spectacle.

PAUL H. JAMISON, Manager.

## For Southern Development

MISSISSIPPI STATE PLANNING COMMISSION

Jackson, Miss.

Editor MANUFACTURERS RECORD:

We are greatly indebted to the MANUFACTURERS RECORD for its persistent and aggressive campaign for the development of the South.

L. J. FOLSE,  
Executive Director.

## Constructive Work

Augusta Lumber Company  
Augusta, Ga.

Editor Manufacturers Record:

We, of the South, are certainly indebted to you for the constructive work that you are doing. I am glad to cooperate with you in furthering this work by submitting several names which may be of interest, but I imagine all of them are regular subscribers at this time. If I had any friends in industry who are not readers of the MANUFACTURERS RECORD, I would disown them.

M. E. DYESS,  
President and Treasurer.

## Four More Years!

J. C. STEELE & SONS

Statesville, N. C.

Editor, MANUFACTURERS RECORD:

We note another eruption on front page of last issue, and the fact is that there is now business, whereas there was not.

Go to it, froth all you want to, but your man from Kansas will never get anywhere, and would not know what it was all about, if he should. Four more years of same authority you now have is a certainty, therefore better pipe down. Several have had strokes from getting het up too much on same subject.

H. O. Steele.

## Too Many Taxes—Too Much Government

SOUTHERN PINE ASSOCIATION

New Orleans, La.

Editor, MANUFACTURERS RECORD:

I enjoy reading the MANUFACTURERS RECORD. Its pages are interesting and enlightening. The editorials are excellent. I admire your determined and courageous stand on the tax question. Too many taxes, too much government, is certainly a bold walk away from the Constitution. There is no substitute for the Constitution that will preserve liberty and independence. Lower taxes and cheaper government must prevail, or the individual will be deprived of all his constitutional rights.

Your aggressive editorials stand out and they have a distinct American flavor. The MANUFACTURERS RECORD is doing a splendid work for the South.

C. A. BAUER, Statistician.

## New Deal Grand

SOUTHERN CONSTRUCTION AND MILL SUPPLY CO.

Mill Machinery and Supplies

Houston, Tex.

Editor, MANUFACTURERS RECORD:

You were unfair to Woodrow Wilson and now you are unfair to the New Deal. We think the New Deal is grand. We know everybody has money now and you even have money enough to send us sample copies which you did not have in '32, and we are for it just as strong as Georgia was the other day.—'Nuff said.

M. A. Hayes.

## Paramount Issues

WILLIAM H. SAVERY

Harpers Ferry, W. Va.

Editor, MANUFACTURERS RECORD:

Having read with great interest your recent editorial on "Labor Unrest," it would appear to me to cover in a clear and compact manner the paramount issue of today.

My impression is, that the large majority of men who occupy the official positions in the leading industrial corporations have won their way to the top by

(Continued on page 80)

# **The Arundel Corporation**

## **BALTIMORE, MD.**

**Constructors and Engineers**  
**Distributors of Sand-Gravel-Commercial Slag**

### **A COMPLETE ORGANIZATION**

Our complete organization with years of experience in successfully executing large construction contracts of various kinds is prepared to undertake the construction of earth, masonry and concrete dams, drydocks, dredging of all kinds, river and harbor improvements, deepening channels, hydraulic filling and rock work, tunnels, railroad construction, sewers and waterways.

#### **PERSONNEL:**

JOSEPH V. HOGAN, President  
W. BLADEN LOWNDES, Vice-President  
JOHN T. DAILY, Secretary  
RICHARD A. FROEHLINGER, Treasurer

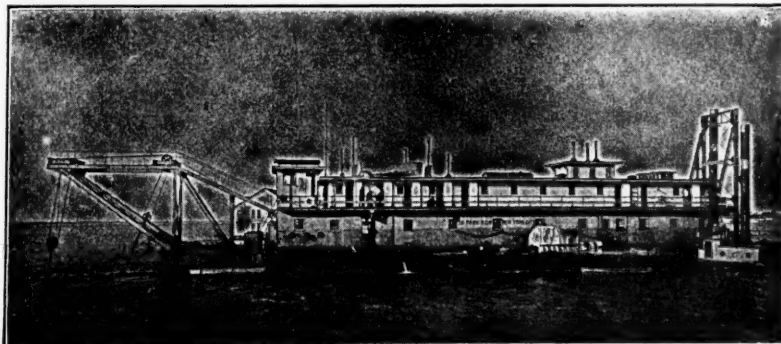
E. L. WADE, Assistant Secretary  
J. N. SEIFERT, Assistant Treasurer  
C. W. BLACK, Chief Engineer  
HOWARD O. FIROR, General Supt.

**MAIN OFFICE: Arundel Building, Pier 2, Pratt Street**  
**BALTIMORE, MD.**

*Branches: NEW YORK CITY—MIAMI, FLA.—NORFOLK, VA.*

## **DREDGING**

**FILLING, LAND RECLAMATION, CANALS, PORT WORKS**  
**RIVER AND HARBOR IMPROVEMENTS—DEEP WATERWAYS AND SHIP CHANNELS**



We are especially equipped to execute all kinds of dredging, reclamation and port works in Southern waters.

Correspondence invited from corporate and private interests everywhere.

*Contractors to the Federal Government*

## **ATLANTIC GULF AND PACIFIC CO.**

**NEW YORK: 15 Park Row**

**HOUSTON, TEXAS: Scanlan Building**

# INDUSTRIAL NEWS

## "Armco Stabilized Steel"

The American Rolling Mill Company, Middletown, Ohio, announces the production of "Armco Stabilized Steel" in cold rolled strip and sheets. It is offered by the company as a uniform, extra deep-drawing and non-aging cold rolled steel with all stretcher strain permanently eliminated in the tempered condition while retaining indefinitely all properties of temper-rolled steel, making prefabrication treatments unnecessary, regardless of the length of time the metal has been in stock.

## Reo Announces New Manufacturing Policy

D. E. Bates, president and general manager of the Reo Motor Truck Co., Lansing, Mich., announces that hereafter the company will concentrate exclusively on the manufacture of commercial vehicles. "We feel," said Mr. Bates, "that the day has passed when trucks and buses can be considered as side lines."

## Florida Lumber Treating Plant

The Gainesville, Florida, plant of the American Lumber & Treating Co., Chicago, Ill., is now in operation, offering its services to lumbermen of the Southeast for supplying pressure-treated lumber. Following the established policy of the company, the Florida plant operates exclusively for service to lumber manufacturers, wholesale and retail dealers, treating lumber with both "Wolman Salts" preservatives and creosote, and operating a double-track Moore kiln for scientific conditioning of material after treatment.

## Bullard-Dunn Process For Descaling Metals

An interesting exhibit to be displayed at the National Metals Show to be held in Cleveland, Ohio from October 19 to 23, inclusive, is that of the Bullard-Dunn Process Division of The Bullard Company, Bridgeport, Conn. The Bullard-Dunn Electro-Chemical Process for degreasing and descaling metals comprises an electrified treatment for the removal of grease and dirt followed by a second electrified treatment in which the scale is removed without pitting, etching or other damage to the work itself. A machine has been developed for handling the work automatically.

## Represents Barco Gasoline Hammer

Barco Manufacturing Co., Chicago, Ill., announces that Morris Lee, Room 1135 Medical Arts Building, Dallas, Tex., is representing the Barco company on its gasoline hammer in Oklahoma, Arkansas, Texas, Louisiana and Mississippi. Mr. Lee transports demonstrating hammers on a truck and will continue to work his territory through personal contact.

## Marietta Paint and Color Company Appointments

The Marietta Paint & Color Co., Marietta, Ohio, announces that M. R. Rust will handle Trade Sales Service for both Marietta and High Point (N. C.) plants in all trade sales territories. J. S. Nichols, Jr., has been appointed Eastern District Sales Manager with offices in New York and a trade sales warehouse has been established at Lincoln, N. J. C. T. Shannon, formerly district manager for B. F. Goodrich & Co., will travel in Western Ohio and West Virginia as territorial representative, with headquarters at Columbus, Ohio. J. G. Heslop, formerly connected with Remington-Rand Corporation, will travel a portion of Eastern Ohio and West Virginia. D. B. McLohon has been appointed territorial representative for Eastern North Carolina, with headquarters at Ayden, N. C., working out of the High Point factory.

## Vice President of Lockett Company

C. C. Crawford has been elected vice president of A. M. Lockett & Company, Ltd., contracting mechanical engineers of New Orleans, La. He joined the Lockett company in 1905 as draftsman and assistant engineer and took part in designing a number of steam power and pumping plants installed by his

company, later becoming manager of the Dallas office. Following his transfer to Houston, he was appointed secretary and general sales manager of the company in 1919 and was located at New Orleans.

## Pittsburgh Steel District Sales Manager

Henry A. Roemer, Jr., has been appointed District Sales Manager at Charlotte, N. C., of the Pittsburgh Steel Company, of Pittsburgh, Pa., with offices at 1314 Johnston Building.

Charlotte. This new district office will serve the Southeastern territory, including North Carolina, South Carolina, Georgia and Florida. Mr. Roemer formerly represented Republic Steel Corporation in the same territory.

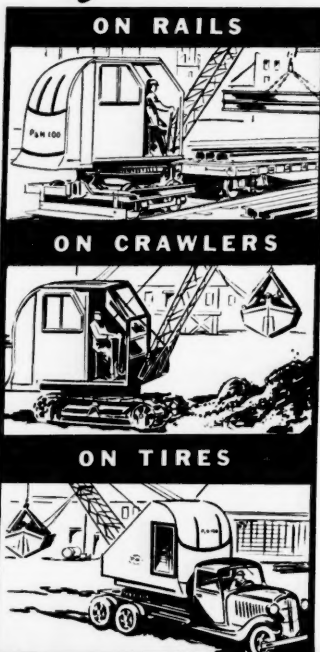
## Chapman Heads Lukenwald

Robert W. Wolcott, president of Lukens Steel Company, Coatesville, Pa., announces the election of Everett Chapman as president of Lukenwald, Inc., a division of Lukens Steel. Mr. Chapman was vice president of Lukenwald, Inc., and succeeds G. Donald Spackman, who has been promoted to the position of general superintendent of Lukens Steel Company. Mr. Spackman, in turn, succeeds J. H. McElhinney, who resigned to join another steel company. Robert J. Whiting, superintendent of Lukenwald, Inc., in charge of all manufacturing, has been elected vice president of that company.

(Continued on page 64)



## P&H "SWITCHER CRANE" for low cost Spur Handling



It's a great, little unit that does two big jobs—moves freight cars and handles all kinds of materials. Self-propelling on standard rail wheels, it pulls from two to seven freight cars, depending upon loads. The light 25-foot boom gives you a wide working range with hook, clam-shell or magnet. It cuts car switching costs, saves time, reduces your investment in handling equipment. Ask for full information about the "Switcher Crane."

## HARNISCHFEGER CORPORATION

Established 1884

4427 W. National Ave. Milwaukee, Wis.

## P&H CRAWLER-TRUCK & "SWITCHER" CRANES



# PAGE FENCE



*Our  
first line  
of defense  
for loyal workers*

• "Our stout PAGE FENCE is not only protective—it is constructive. Loyalty within the plant increases because every worker knows we erected that fence to guard him against violence, just as much as to protect our property from damage. Many a time reason has conquered rampage right at the fence line."

"Our Engineering Department knows PAGE FENCE for its many constructional advantages: for example, the new wing channel Line Post providing superior galvanizing, greater strength, a far neater, more serviceable installation."

Because no one metal is suitable for all fence conditions—PAGE alone offers a selection of superior fence metals—PAGE-ARMCO Ingot Iron, PAGE "ALCOA" Aluminum, PAGE Allegheny Stainless Steel, PAGE Copper-Bearing Steel, PAGE genuine Wrought Iron.

Located conveniently throughout the United States are 92 Page Fence Distributors who will gladly consult with you, without obligation, in best solving your fencing problem. They are prepared to recommend impartially the particular metal that will give you the best service, and to assume full responsibility for proper installation.

Write to any of the offices shown below for helpful literature and name of the Page Fence expert nearest you.

## PAGE FENCE ASSOCIATION BRIDGEPORT, CONNECTICUT

New York Pittsburgh Atlanta Chicago San Francisco

### **This Label . . . Your Guarantee**

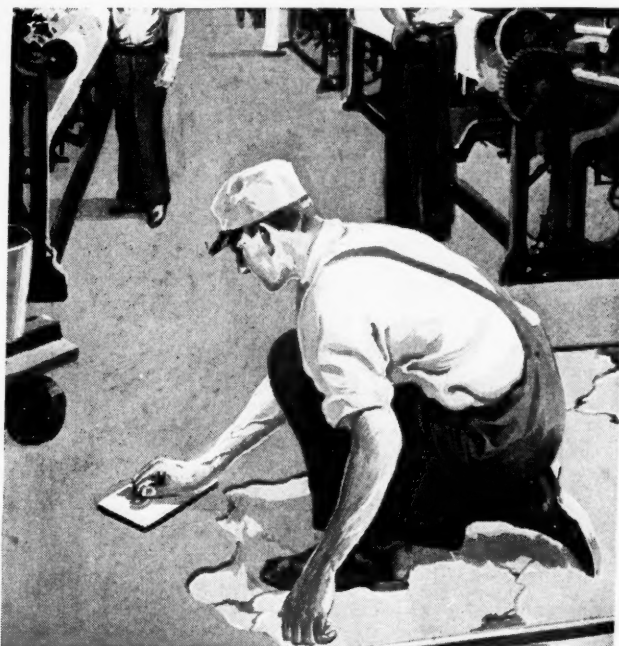
The PAGE P-12 label identifies PAGE galvanizing which is guaranteed to withstand a minimum of 12 one-minute dips by the Preece Test. PAGE P-12 galvanizing applies not only to fence fabric but also to posts, top rail and fittings as well—your guarantee of maximum resistance to rust.

**AMERICA'S FIRST WIRE FENCE... SINCE 1883**

*A new floor*  
over  
the week-end



*Dustless . . . Skid-proof . . .  
Vermin-proof . . .  
Practically noiseless*



Using Emulmastic you can resurface the floors of industrial plants on Saturday and have a new, smooth-surface floor ready for use Monday morning.

## **Emulmastic**

Applied COLD . . . will not soften in Summer—will not crack in Winter—is odorless.

It's ideal for patching or re-surfacing old mastic or concrete floors—can be used over concrete, wood or other suitable base.

## **THE BARBER ASPHALT COMPANY**

Philadelphia New York Chicago St. Louis

*Send the Coupon*

THE BARBER ASPHALT COMPANY  
1600 Arch St., Philadelphia, Pa.

MR10

Please send me a copy of your illustrated folder—"7 Reasons for Using"—describing EMULMASTIC.

NAME . . . . . ADDRESS . . . . .

## INDUSTRIAL NEWS

### Manufacturers Exhibit

The Purchasing Agents' Association of Baltimore is sponsoring a manufacturers products exhibit to be held at the Lord Baltimore Hotel October 20-21. In the main ball room of the hotel 48 booths have been made available for displays. The exhibit, which is to be open to the public as well as to members of the association, is in charge of: Frank H. Carter, Dietrich Bros., Inc., chairman; W. W. Gast, E. I. du Pont de Nemours & Co., Inc.; W. R. North, Revere Copper & Brass Inc.; Leonard F. Olt, Crown Cork & Seal Co.; C. C. Seidenstricker, Calvert-Maryland Distillery; J. H. Gaston, City Purchasing Agent, and W. N. Kirkman, State Board of Health.

### Carrier Discontinues Subsidiaries

In order to effect a simple corporate structure and to accomplish administrative savings, the Carrier Corporation, Newark, N. J., announces the discontinuance and liquidation of three of its subsidiaries—Carrier Engineering Corporation, Carrier-Brunswick, Inc., and Carrier Engineering Corporation of California. All business formerly conducted under the name of the subsidiaries will hereafter be conducted directly by Carrier Corporation which now becomes an operating company.

### Changes Representation in Southwest

Changes in representation in its Southwestern territory have been announced by the Babcock & Wilcox Tube Company, of Beaver Falls, Pa.; H. S. Dersheimer has been appointed District Sales Manager, with offices in the Philtower Building, Tulsa, Okla., and direct representation in the Dallas territory will be effected through Reid R. Lumsden, with offices at 728 Wilson Building, Dallas, Tex. For the Houston territory, O. E. Berg will be in charge of the company's office at 1007 Electric Building, Houston, Tex.

## TRADE LITERATURE

### APPALACHIAN COALS—

Folder—listing agents authorized to distribute high volatile coals produced by companies affiliated with the Appalachian marketing agency.

Appalachian Coals, Inc., Cincinnati, Ohio.

### AUSTIN-WESTERN LITERATURE—

Bulletin No. 1617—illustrating and describing Austin-Western Road Graders;  
Folder—illustrating and describing Roll-A-Plane for leveling and compacting;  
Folder—illustrating and describing Austin-Western crushing and screening plants.

The Austin-Western Road Machinery Co., Aurora, Ill.

### WATER SOFTENER—

Booklet No. 2059—illustrated, describing deaerating type of Cochrane Hot Process Water Softener and detailing progress made by so combining deaerating and softening elements as to give a simplified arrangement, low installation and maintenance cost, small space requirements and protection of boilers and economizers from scale and corrosion.

Cochrane Corporation, Philadelphia, Pa.

### G-E MOTORS OF NEW DESIGN—

Bulletin GEA-2345—devoted to General-Purpose Squirrel-Cage Induction Motors;  
Bulletin GEA-1619B—illustrating and describing Splashproof Induction Motors;  
Bulletin GEA-1538A—illustrating and describing Type K Totally Enclosed Induction Motors;  
Bulletin GEA-1341C—devoted to Explosion-Proof Totally Enclosed, Fan-Cooled Induction Motors for Class I, Group D, Hazardous Locations;  
Bulletin GEA-1366A—devoted to Type KR Totally Enclosed Hoist Motors;  
Bulletin GEA-1326B—Totally Enclosed Fan-Cooled Induction Motors.

General Electric Company, Schenectady, N. Y.

### POWER CONTROL UNIT—

Folder—covering the Power Control Unit which operates all Le Tourneau cable-controlled equipment.

R. G. Le Tourneau, Peoria, Ill., and Stockton, Cal.

### WHITE AND RED OAK—

Bulletin No. 2—Southern Hardwood Information Series, detailing the nature, characteristics, availability, distribution and uses of white and red oak.

Southern Hardwood Producers, Inc., New Orleans, La.

### DRYERS AND COOLERS—

Bulletin 1263—dealing with dryers and coolers, illustrating and describing the Nordyke type rotary steam dryer adapted to drying granular materials and widely used in the corn milling industry, and more recently in the soybean and other processing industries.

Allis-Chalmers Manufacturing Co., Milwaukee, Wis.

### CONCRETE JOIST CONSTRUCTION—

Handbook—"Concrete Joist Construction," presenting information and practical data on reinforced concrete joist construction for floors and roofs.

Concrete Reinforcing Steel Institute, Chicago, Ill.

### TEXTILE WASTE WATER—

Booklet—118 pages, entitled "Textile Waste Treatment and Recovery," a survey of "present knowledge concerning the treatment and disposal of waste waters produced in the textile industries," by John C. Geyer and William A. Perry; price \$1.00.

The Textile Foundation, Inc., Washington, D. C.

### DRY RECTIFIERS—

Booklet B-2078J12 pages, describing selection and application of Rectox copper oxide rectifiers for changing a-c to d-c without moving parts or chemical reaction.

Westinghouse Electric and Manufacturing Co., East Pittsburgh, Pa.

### BOULDER DAM—

Booklet—telling a brief story of the building of Boulder Dam and presenting an attractive and interesting picture-story of a noteworthy engineering achievement. It features a story of the "greatest roof in the world," protecting \$8,000,000 worth of power machinery, and tells of the part Barrett Roofing played in its construction.

The Barrett Company, New York City, Chicago, Ill., and Birmingham, Ala.

### STEEL FOR BUILDINGS—

Booklet (Revised 1936)—specification for the design, fabrication and erection of structural steel for buildings.

American Institute of Steel Construction, New York City.

### DAVISON'S TEXTILE BLUE BOOK—

Book—71st Year, only annual register of textile industry published in 1936;  
Folder—showing the distribution of textile mills for the nation's entire industry.

Davison Publishing Co., 50 Union Square, New York.

### EQUIPMENT FOR METAL PROCESSES—

Bulletin No. 101—illustrating and describing special equipment for process industries fabricating metals.

Edge Moor Iron Works, Edge Moor, Del., and New York City.

### WELDED OIL TANKS—

Specifications—tentative, for all-welded oil storage tanks.

American Petroleum Institute, New York.

## There are— Opportunities in FLORIDA for investment—

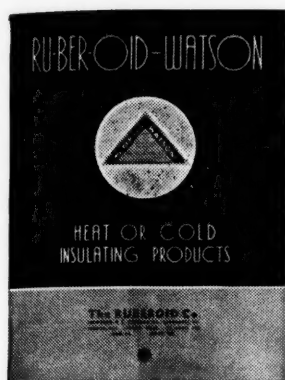
To learn of the many and varied opportunities for investment one should visit Florida and make a personal survey of the different sections of the State—

For undeveloped farm and grove lands, industrial sites and beach property on the East Coast of Florida—consult—

**Model Land Company**

*Flagler System*

St. Augustine—Florida



**FREE**  
This **NEW**  
**36-page**  
**CATALOG OF**  
**INSULATING**  
**PRODUCTS**

**RU-BER-OID**

ROOFING AND BUILDING PRODUCTS

The Ruberoid Co. Executive Offices: 500 Fifth Ave., New York

**I**F YOU HAVE temperature control problems, your engineering or factory maintenance department will appreciate a copy of this new Ruberoid-Watson catalog.

Within the 36 pages you will find complete factual data and tables covering asbestos pipe coverings for low, medium and high temperatures, and such insulation specialties as 85% Magnesite, Mineral Wool, Asbestos Millboard, Asbestos Paper, Corrugated Asbestos Paper, Fireproof Insulating Board, and Asbestos Cements.

Address Dept. MR-10 for your copy today.



**OF THOSE WHO COME INTO YOUR PLANT**

To reduce theft and damage, keep out unwelcome visitors! An enclosure of Pittsburgh Fence is an assurance of this protection that is well worth its cost. Erected on a sturdy frame of heavily zinc-coated steel, Pittsburgh Chain Link Fence can "take" the impacts of everyday abuse. Write today for an estimate of the cost of enclosing your property. There is no obligation.

**PITTSBURGH STEEL COMPANY**  
753 Union Trust Building, Pittsburgh, Pa.

**Pittsburgh Fence**



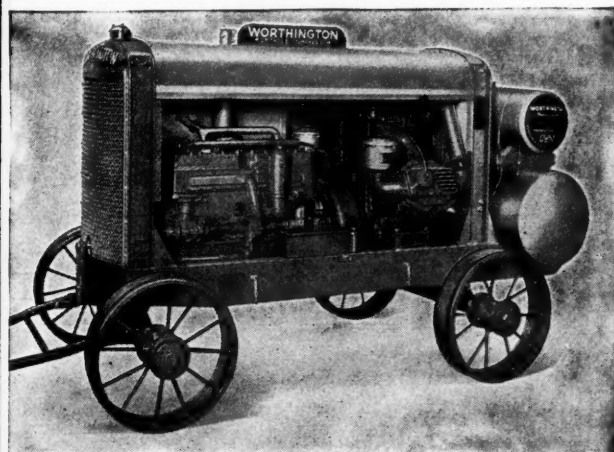
**air**

• **FULL CAPACITY**

• **UNINTERRUPTED SERVICE**

when

**WORTHINGTON**  
**PORTABLES**  
*are on the job*



No. 36  
Rock  
Hammer



No. 10  
Pavement  
Breaker



No. 9  
Clay  
Digger



No. 8  
Backfill  
Tamper

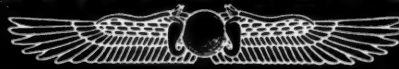
...and when the  
air tools are Worthingtons,  
the stick-to-it factor is 100%

• *Literature on request*

**WORTHINGTON PUMP AND MACHINERY CORPORATION**  
General Offices: HARRISON, NEW JERSEY

A-36478 Offices and Representatives throughout the World

**WORTHINGTON**





## Holding the Scales in Equal Balance

(Continued from page 33)

Morgan, Chairman of the TVA, in *The Forum* of March, 1935, in these words:

"The President wishes that somewhere in America there should be a case of public generation, distribution, and sale of power . . . And if they are to serve as comparisons, they must be open and above-board, with nothing hidden. They must be fair, with no special arbitrary advantages. They must pay taxes, just as private utility companies must do, and every reasonable charge, if they are to provide us with a fair comparison."

But the practice has departed from the theory. Special arbitrary advantages have been accorded the TVA in many respects such as:

1. Funds for construction and operation are provided from the Federal Treasury, and ultimately, of course, from the pockets of the taxpayer.
2. It is directed by the law creating it to charge off to (a) flood control, (b) navigation, (c) fertilizer and (d) national defense, whatever part of its investment it chooses, leaving only a minor fraction to show up in its cost of producing power. Its annual report for 1935 shows that it has charged to hydro-electric generating property a total of \$60,756.02 for 1934 and 1935, against expenditures of many millions of dollars. We are put on notice, however, that some further allocation may be made to electricity production.
3. It is practically exempt from taxation.
4. It uses a "frank" for much of its voluminous propaganda, bills, letters, advertising, etc.
5. Much of its printing is done by the United States Government Printing Office.
6. The Federal Treasury relieves it of the cost of insurance and damage commonly covered by Workman's Compensation Insurance.
7. It makes only an inadequate allowance for annual depreciation; and from the 1935 report of TVA, it does not appear that any allowance whatsoever was made.
8. It is relieved of the cost of complying with State laws and the cost of State regulation.
9. Its automobiles and airplanes, and the gasoline consumed by them, are exempt from all forms of taxation.
10. It receives preferential freight rates and preferential passenger rates not available to the utility companies.

In addition, the PWA, at the request of TVA, announces a gift to a prospective municipal customer of TVA of 30% to 45% of the cost of duplicating the facilities of the utility and agrees to furnish the balance of the cost out of Federal funds borrowed on the credit of the United States, and repayable, if at all, out of earnings, if any, of the duplicate system,—all upon condition that the municipality shall agree to use TVA power, and as soon as legally possible out the existing utility from its market. This is evidenced in the cases of Florence, Sheffield, Tusculumbia, Russellville, Gunter'sville, Decatur, Bessemer, Tarrant City, Memphis, Knoxville, Chattanooga, and other important markets now served by the utilities.

For instance, the PWA announced on

June 2, 1936, that it would grant \$3,029,000 to Memphis, Tennessee, as the Federal Government's gift towards a \$6,872,000 plant; a gift of \$1,948,000 to Chattanooga to finance a \$4,330,000 system and a gift of \$90,000 to Knoxville to help on the \$200,000 the city plans to spend improving existing facilities.

It is clear to the impartial student of the subject that TVA is not responsible for any increase in the business of the utilities; that its program is one of seizing the markets and customers of the utilities; and that it is enabled to carry on this program only by reason of its special arbitrary advantages.

Take away the special arbitrary advantages and nothing will be left of the TVA's power program.

**T**HE TVA should pay taxes if its officers are in sympathy with President Roosevelt, who spoke through TVA Chairman A. E. Morgan in his article in *The Forum*, March, 1935, as quoted previously.

Let's see what happened in Mississippi where, in 1934, and 1935, TVA acquired from a local utility in Mississippi a large amount of electric property, which it expanded. When TVA made a tax return in Mississippi covering the property it owned in that State, the return bore these words on each sheet of the return:

"Notwithstanding any language printed on this sheet, all property listed hereon is exempt from taxation as set forth in TVA's letter of transmittal April 1, 1935."

*Is that statement consistent with the views of the President?*

One of the power associations receiving power from the TVA recently made a tax return of its property in Mississippi bearing the statement:

"The filing of this return is not an admission of liability for taxation, but for the information of the Tax Commission as to the amount of property and the value of same which was owned by the TVA on January 1, 1935; said property is claimed to be exempt from assessment for ad valorem taxation."

A recent bulletin<sup>4</sup> issued by the University of Alabama said:

"In the northern section of the State, the Federal Government through its Tennessee Valley Authority activities is taking many thousand acres of land from the assessment rolls. Limestone County alone is estimated to lose 52,000 acres of the rich Tennessee Valley land which will remove approximately \$1,000,000 from the assessed values. Lauderdale County also will lose much land which together with equipment valuation lost is estimated to total \$1,000,000. Madison County is estimated to lose approximately \$300,000 while in Morgan the loss will probably be \$700,000."

**D**URING the last fiscal year, TVA, on property and funds totaling approximately \$380,000,000 paid a total of \$40,000 to the State of Alabama in lieu of taxes. Nothing was paid to any other State. During the year 1935 the taxes of Alabama Power Company on property less than one-half of that represented by the TVA, amounted to \$2,427,187.98 or over 15 per cent of its total

<sup>4</sup>"The Effect of the Proposed Homestead Exemption on Assessed Value and Receipts of various Units of the State of Alabama," by Professor C. H. Knight, School of Commerce and Business Administration.

revenues. Is it fair for the property of a private company, approximately half of the present size of TVA, to pay annually 60 times the taxes paid by Tennessee Valley Authority?

I have before me the revenue act passed in the closing days of the last session of Congress which places increased tax burdens upon the people and which will increase the taxes paid by this company, —a part of which will be given to TVA to carry on its program of unfair competition and I also have before me the deficiency appropriation act giving to TVA an additional \$39,900,000 of money to be used in the continued construction of dams, transmission lines, etc., with which to take away from us the markets we have spent years in building up.

A great judge once commented "that if the possibility of a government usurping the ordinary business of individuals, driving them out of the market, and maintaining place and power by means of what would have been called, in the heated invective of the time, 'a legion of mercenaries,' had been in the public mind, the Constitution (of the United States) would not have been adopted, or an inhibition of such power would have been placed among Madison's Amendments." 5

Rather we like to think of the Government of the United States as an agency that holds the scales in equal balance between contending forces.

<sup>5</sup>Justice Brewer in *South Carolina v. United States*, 190 U. S. at p. 457.

## Broadening Markets for Cement

(Continued from page 42)

roads to fit the traffic involved. Thinner slabs designed for lighter traffic loads are phases of this new plan. This makes it possible to give such secondary roads durability and desirable riding qualities at low maintenance and low total cost. This provides opportunity for a new use of cement in a field which hitherto has been hardly touched.

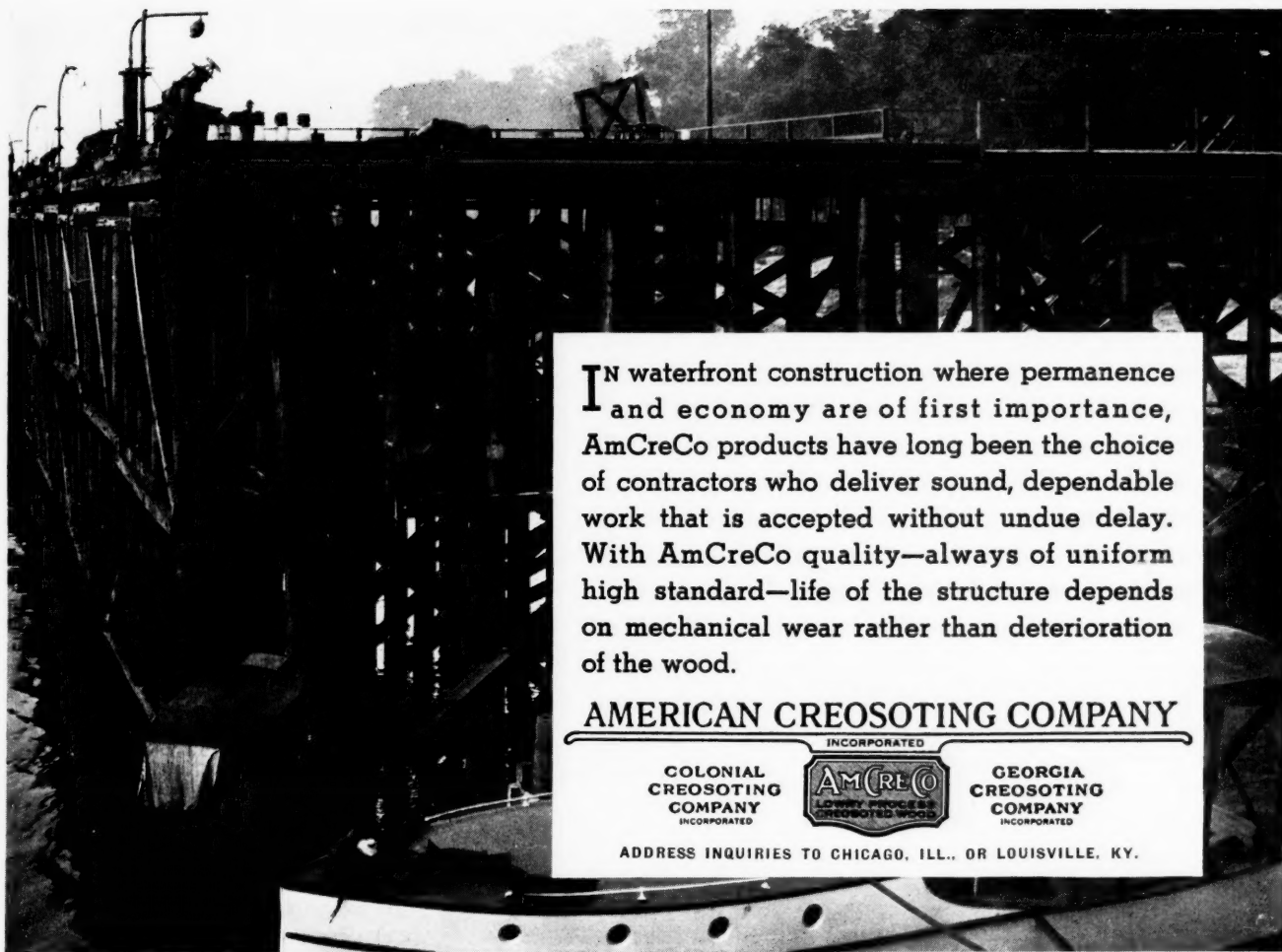
### Concrete Roadbed

The new fast streamlined railroad trains require a roadbed that is safe, stable and able to stand up under the speed of modern traffic. Railroads are considering use of concrete roadbeds for this purpose. One road has used experimental sections for more than 10 years with satisfactory results. Concrete roadbeds promote safety and greatly reduce maintenance costs. Here is an undeveloped field for use of cement.

### Airport Runways

The new heavy airplanes operate best on hard-surfaced runways which are free from bumps or ruts, easy to see, need little or no maintenance and are permanent. Modern airports like Floyd Bennett Field, N. Y., from which many noted fliers have taken off on their trans-Atlantic flights, Detroit, Indianapolis, Hills-grove, R. I., and others have concrete runways. This field offers a large potential market. Its development will aid aviation, benefit construction and increase cement business.

With the present improvement in construction, with substantial gain in shipment of cement and with many new uses of that product awaiting development, there is reason to feel encouraged over the future.



**I**N waterfront construction where permanence and economy are of first importance, AmCreCo products have long been the choice of contractors who deliver sound, dependable work that is accepted without undue delay. With AmCreCo quality—always of uniform high standard—life of the structure depends on mechanical wear rather than deterioration of the wood.

**AMERICAN CREOSOTING COMPANY**

INCORPORATED

COLONIAL CREOSOTING COMPANY INCORPORATED

AMCRECO LOWRY PROCESS CREOSOTED WOOD

GEORGIA CREOSOTING COMPANY INCORPORATED

ADDRESS INQUIRIES TO CHICAGO, ILL., OR LOUISVILLE, KY.

## HUTTON & BOURBONNAIS CO.

HICKORY, N. C.

Industrial Crating, Box Shooks, Rough and Dressed Lumber, Oak Flooring, also Pinus Strobus Pattern Lumber, White Pine, N. C. Pine, Oak, Poplar and Chestnut.

INQUIRIES SOLICITED.

## CREOSOTED TIES, PILING, POLES, POSTS, CROSS ARMS, and LUMBER

WOLMANIZED LUMBER—

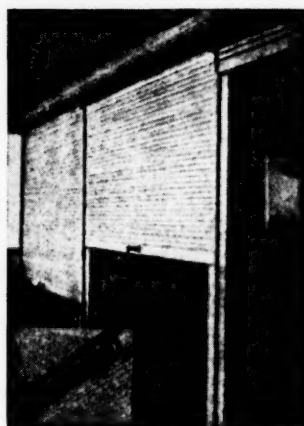
Decay and Termite Proof—Can Be Painted

*Docks for Ocean Vessels*

**American Creosote Works, Inc.**  
New Orleans, La.

**Atlantic Creosoting Co., Inc.**  
Norfolk, Virginia

Plants at: New Orleans; Winnfield, La.; Louisville, Miss.  
Savannah, Ga.; Jackson, Tenn., and Norfolk, Va.



## ROLLING WOOD PARTITIONS

For all purposes: Wherever Division of Rooms is required. Also

**VENETIAN BLINDS**

Reliable Material and Low Prices.

**SWEDISH VENETIAN BLIND CO.**

601 W. 26th St.  
New York

Branches in  
Principal Cities

## DEFEAT DRY ROT AND TERMITES

by pressure-treating your lumber and timber with ZMA or Creosote. Eppinger & Russell Co.'s preserving process increases the life of woods from 8 to 20 times. For more than half a century, the outstanding utilities and industrial plants have depended upon Eppinger & Russell Co. for long-life, low-maintenance lumber that is immune to decay, dry rot and termite attack.

PRESSURE-TREATING PLANTS AT:

Jacksonville, Fla.

and

Long Island City, N. Y.

WOOD PRESERVERS SINCE 1878  
**EPPINGER & RUSSELL Co**  
84 Eighth Ave., NEW YORK CITY



# Trees For Flood Control

Tree Roots "Hang On" to Soil Within Grasp

**T**HAT forests reduce the danger of disastrous floods is strikingly shown in the detailed study of the effects of single trees against the onslaught of erosion from water runoff. The root system of trees are important factors in holding the soil together and preventing tons of it from being washed down hillsides and carried off in swollen streams and rivers.

The accompanying illustration shows erosion of shallow shale soil near Etowah, Tenn., in an area cleared of trees and not being farmed. The root system of the single shortleaf pine, consisting of hundreds of roots and rootlets, is interlaced in the soil and has effectively held an

## Root Distribution of Shortleaf Pine

Shows erosion of shallow shale near Etowah, Tenn., but the interlaced tree roots have been effective in holding soil in place.

Photo by U. S. Forest Service

island of soil in place, even though the surrounding soil has been washed away. This picture also indicates the difference in erosion that has taken place in the clearing where all trees have been cut down, and in the background, where the stand of young pines has effectively protected the forest floor by means of its root system, forest litter and subsequent absorption ability.

More than five feet of soil have been eroded from the base of a single tree, yet the network of roots have held together the soil immediately within their grasp.

By multiplying the soil-holding effect of these single trees, a clear idea may be obtained, the U. S. Forest Service says, of the soil-holding capacity of whole forests on watershed areas. Ruthless cutting over and negligence which allows the burning of important forested watersheds is in large measure responsible for floods.

# Brake Shoe Foundry Starts Production at Memphis

Pine Bluff Company Opens First Unit Of \$250,000 Plant

Buildings for the \$250,000 plant being established at Bodley and South Main Streets, Memphis, Tenn., by the Standard Brake Shoe & Foundry Company, of Pine Bluff, Ark., are now completed for the first unit to begin operation, reports E. S. Dille, general manager of the company.

The first unit is a gray iron foundry to be devoted to producing brake shoes, railroad and miscellaneous castings in both carbon and alloyed iron, the company being one of the oldest manufacturers of brake shoes with wide distribution not only throughout this country but in foreign markets as well.

The site of the plant covers eleven and a half acres and is the former scene of operations of the Memphis Iron & Steel Company, purchased last fall. The first buildings cover areas of 100 x 286 feet, 110 by 150 feet and 85 by 150 feet, with several of smaller dimensions and an office structure. These are of brick, steel and glass construction.

Work on the new enterprise is being done by the company's own engineering force. The equipment being installed includes modern foundry and cleaning room outfits including a cupola, molding machines, sand mills, grinders, ratters, blowers and compressors.

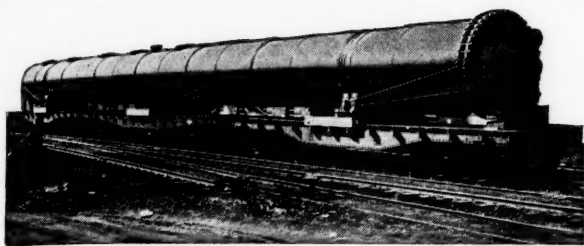
Principal sources of supply for the equipment and supplies are:

Pangborn Corp., Hagerstown, Md.  
Northern Engineering Works, Detroit, Mich.  
Foundry Equipment Co., Cleveland, Ohio.  
Ingersoll-Rand, Inc., St. Louis, Mo.  
Reading Chain & Block Corp., Reading, Pa.  
Pidgion-Thomas Iron Co., Memphis, Tenn.  
Howe Scale Co., St. Louis, Mo.  
LaCade-Christy Clay Products Co., St. Louis, Mo.  
Fanner Manufacturing Co., Cleveland, Ohio.  
J. S. McCormick Co., Pittsburgh, Pa.  
International Molding Machine Co., Chicago, Ill.  
Steel City Testing Laboratory, Detroit, Mich.  
Capewell Horse Nail & Manufacturing Co., Hartford, Conn.  
American Steel & Wire Co., Chicago, Ill.  
International Business Machines Corp., Memphis, Tenn.  
Standard Steel Products Co., Pine Bluff, Ark.  
Truscon Steel Co., Cleveland, Ohio.  
Graybar Electric Co., Memphis, Tenn.  
United States Gypsum Co., Chicago, Ill.  
Hobart Electric Welding Machine Co., through Hays Supply Co., Memphis, Tenn.  
M. A. Bell Co., St. Louis, Mo.  
Whiting Corp., Harvey, Ill.  
Hill & Griffith Co., Birmingham, Ala.  
Sloss-Sheffield Steel & Iron Co., Birmingham, Ala.  
Semet-Solvay Coal & Coke Co., Birmingham, Ala., and New York.  
A. B. C. Coal & Coke Co., Birmingham, Ala.  
Adams, Rowe & Norman, Birmingham, Ala.  
United States Electrical Tool Co., Cincinnati, Ohio.  
National Engineering Co., Chicago, Ill.  
General Electric Co., Memphis, Tenn.





## For Warm Relations in Fabrication



Cole Creosoting Cylinder 8' diameter x 138' long.

## High Pressure Vessels of Cole Steel

When in need of tanks and vats for acid storage, NaOH storage, etc., agitator tanks, bubble towers, gas scrubbers, creosoting cylinders and other heavy pressure vessels and fabricated work, call on COLE. "Custom-made" to order in plain and Alloy steel, Nickel-Clad and Stainless steel, Monel metal, lead lined, tin lined, aluminum, etc. Other COLE products are:

Tanks	Kiers	Welded Steel Pipe
Towers	Kettles	Digestors
Standpipes	Vats	Storage Bins
Smokestacks	Air Receivers	Fabricated Framework

BOILERS (HRT AND MANNING)

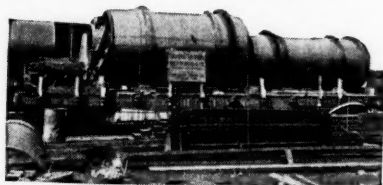
Our Engineering Department will submit designs or any equipment may be made from your own specifications.

Write for "Tank Talk"—No. 13-D.

**R.D.COLE MANUFACTURING CO.**  
NEWNAN EST. 1854 GEORGIA

## SOUTHLAND PRODUCTS

—WELDED OR RIVETED—



We now manufacture and offer to the trade tanks in all sizes for pressure or gravity work. Also other steel equipment of either

**WELDED OR RIVETED CONSTRUCTION**

This applies to field as well as shop built equipment.

Write us for information and quotations.

**CHATTANOOGA BOILER & TANK CO.**  
CHATTANOOGA, TENN.

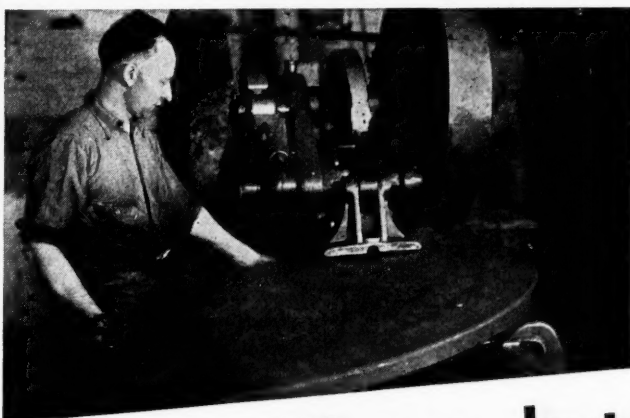
## DAVIS CYPRESS WATER TANKS

It's no unusual fact for a Davis Tank to last 25 to 35 years, as hundreds of southern industrial plants can testify. Cypress need only be outside-painted to last indefinitely; keeps water cool and sweet, and when Davis-built represents a major economy in equipment cost, either inside or outside the plant. Ask for estimates—any size, shape, for any purpose. Our new catalog will also be mailed on request.

**G. M. DAVIS & SON**  
P. O. Box 5  
Palatka, Fla.



Flanging the tank head of a truck is easy, sure and economical with Armco H.T. 50. A ductile, free-working uniform steel.



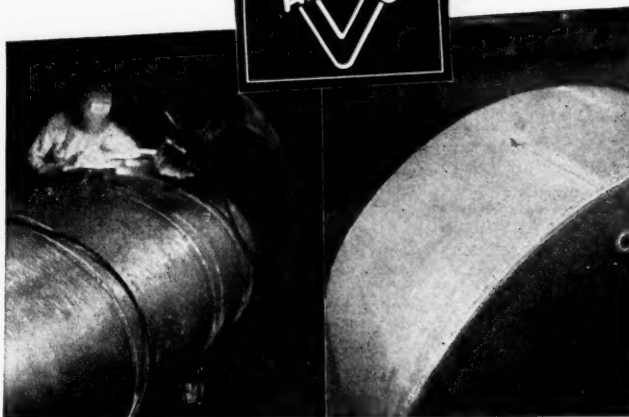
## here's a different slant on application of High Tensile Steels

Every design engineer knows that a yield point between 40,000 and 50,000 lbs. per sq. inch gives him ample strength. He also knows that as strength increases workability decreases. To use steels with yield points as high as 75,000 when only 50,000 are necessary makes the job of fabrication that much harder and costlier.

The hot-rolled grade of ARMCO H. T. 50 gives you a yield point of 47,000 lbs. per sq. inch; the cold-rolled grade 52,000. Tensile strengths are in proportion. And you get exceptional ductility; easy, uniform welding with standard electrodes; good, clean surface; desirable flatness and, above all, consistency of the steel.

Learn how ARMCO H.T. 50 saves fabrication dollars, speeds production, and stands up splendidly in high-tensile service. Get in touch with us today. The American Rolling Mill Co., Middletown, Ohio.

**ARMCO H.T. 50**



Welding Armco H.T. 50. No special electrodes are needed, and the welds are sound, tight and smooth.

Note the beautiful welds, the good surface of the steel and the perfect contour and balance of the tank.

## Broadening Agricultural Markets

**I**NDUSTRY and science, cooperating with farmers, are tackling the agricultural problem in a way that promises to be effective and of lasting benefit. Broader markets through the development of by-products and new uses for agricultural products comprise the solution. In this work, the Farm Chemurgic Council has been making real progress in furthering research and development. Particularly important has been its cooperation with Southern interests in seeking to secure a better balanced agriculture.

A Southern Conference of the Farm Chemurgic Council, under the joint auspices of the Beaumont, Texas, and Lafayette, La., Chambers of Commerce, is to be held at Lafayette, La., October 15-17. And on October 20-21 joint meetings of the Gulf Coast Chemurgic Conference and the Tung Oil Association of America are to be held at Pensacola, Fla. Leading scientists and business men are to participate in these meetings.

At the Lafayette, La., conference, P. B. Doty, Conference Chairman, and President of the First National Bank, Beaumont, will preside. Following the welcoming address by Richard W. Leche, Governor of Louisiana, to which J. E. McDonald, Commissioner of Agriculture, Texas, will respond, Carl B. Fritsche, Managing Director, Farm Chemurgic Council, Dearborn, Mich., will speak on

"The Origin and Purposes of Farm Chemurgic."

Other principal topics and speakers, include:

**The Utilization of Farm Wastes**—Dr. Henry G. Knight, Chief, Bureau of Chemicals and Soils, Washington, D. C.  
**Cotton in the Social and Economic Life of the South**—N. C. Williamson, President, American Cotton Cooperative Association, New Orleans.  
**Expanding Uses for Cotton Fiber**—Dr. H. S. Willis, Dean, Textile School, Clemson College, S. C.  
**Cotton in Road Building**—Charles K. Everett, Manager New Uses Section, Cotton Textile Institute, New York City.  
**New Uses for Cottonseed Oil**—A. L. Ward, Director Educational Service, National Cottonseed Products Association, Dallas.  
**Economic Problems of the Sugar Cane Industry**—C. D. Kemper, Manager, Sterling Sugars, Inc., New Orleans.  
**Manufacture of Alcohol from Sugar Cane By-Products**—Dr. W. L. Owen, Consulting Bacteriologist, Baton Rouge, La.  
**Industrial Utilization of Sugar Cane Fibers**—Dr. T. B. Munroe, Vice President, Celotex Corporation, Chicago.  
**The Use of Bagasse in Animal Feed and Plant Mulches**—Walter Godchaux, Vice President, Godchaux Sugars, Inc., New Orleans.  
**Other Possible Uses for Bagasse**—Dr. Raymond Stevens, Vice President, Arthur D. Little, Inc., Cambridge, Mass.  
**What Chemurgy Can Do for the South**—Howard E. Coffin, Chairman, Southeastern Cottons, Inc., New York City.  
**Wider Uses for Rice and Its By-Products**—H. E. Gardner, Southern Alkali Corporation, Corpus Christi, Texas.  
**Possibility of a Wider Production of Naval Stores in the South**—Captain I. F. Eldredge, Director of Surveys, Southern Forest Experiment Station, New Orleans.  
**Progress of the Tung Oil Industry**—Dr. C. C. Concannon, Chief, Chemical Division, Bureau of Foreign and Domestic Commerce, Washington.  
**The South as a Future Source of Wood Pulp**—Dr. Charles H. Herty, Director, Pulp and Paper Laboratory, Savannah, Ga.  
 Drs. Concannon, Fritsche, and Herty

also will be among the speakers at the Pensacola, Fla., meeting October 20-21. While the subject of tung oil will feature the discussions, other phases of agriculture will be treated, including "Utilization of Waste Forest Materials" by R. C. Palmer, Chief Chemist, Newport Industries, Inc., Pensacola. The purpose of the convention will be told by J. C. Adderley, General Chairman of the Gulf Coast Chemurgic Conference and President of the Tung Oil Association of America, Pensacola.

### ILG UNIT HEATERS—

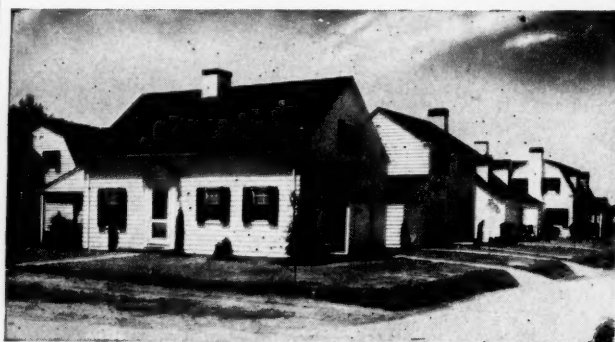
Catalog No. 125—devoted to Ilg Unit Heaters, with announcements covering two new Ilg developments—one the new Ilg Floated Drive for Ilg direct-connected blowers, and the other a new Deluxe Ilg unit heater finish in a number of smart colors.  
**Ilg Electric Ventilating Co., Chicago, Ill.**

### U. S. CAST IRON PIPE—

Official Publication—"The U. S. Piper" for September, pictures and describes interesting installation of cast iron pipe in connection with large sewage projects at Annapolis, Md., and in another feature article tells of cast iron pipe being salvaged and relaid in Oklahoma City.  
**United States Pipe and Foundry Company, Burlington, N. J.**

### J-M INDUSTRIAL PRODUCTS—

Catalog—1936 edition, 60 pages, illustrated, presenting information and recommendations on high and low temperature insulations for industrial needs, with specifications on J-M Bonded Asbestos Builtup Roofs, J-M Insulated Roofs, J-M Corrugated Transite for Roofings and Sidings, Steeltex Floor Lath, Welded Wire Reinforcement, sound control of mechanical equipment, etc.  
**Johns-Manville Corporation, New York.**



Kanawha City Development, Charleston, W. Va. Architects, Warns, Tucker & Stilling, Charleston. Walls painted with Cabot's DOUBLE-WHITE COLLOPAKES, shutters with Cabot's Gloss Collopacks; roof stained with Cabot's Creosote Shingle Stains.

### Easy To Sell

The sparkling crisp colors of Cabot's Collopacks (the colloidal paints) and Cabot's Stains make the houses in any development easier to sell. Their long life and economical upkeep invariably make friends for the builder. For further information, sign and mail coupon below.

### Cabot's Stains and Collopacks

Samuel Cabot, Inc., 141 Milk St., Boston, Mass.

Gentlemen: Please send me further information on ☐ Cabot's Collopacks; ☐ Cabot's Stains.

Name .....

Address ..... MR-10-36

**Certain-teed**

**Cordially invites you**

to go through the Certain-teed Roofing Plant at Savannah, Ga. See "Millerizing" . . . see the "Sealed Granules" process. Or, for immediate information, call at one of these Certain-teed offices:

**SALES OFFICES**  
 Atlanta, Georgia, 1111 Rhodes Haverly Bldg.  
 Baltimore, Maryland, 1309 Lexington Bldg.  
 Certain-teed Products Corp. of Va., Ninth and Main Sts., Richmond, Va.  
 Plant located at Savannah, Georgia

**CERTAIN-TEED PRODUCTS CORP.**  
 General Offices . . . . . New York, N. Y.

**SOUTHERN MADE FOR SOUTHERN TRADE**

# RYERSON STEEL-SERVICE

Immediate shipment of steel and allied products including Bars, Structurals, Sheets, Shafting, Alloy Steel, Stainless Steel, Welding Rod, Boiler Tubes, Bolts, Nails, Brass, Copper, Babbitt Metal, Tools, etc. Write for Stock List. Joseph T. Ryerson & Son, Inc., Chicago, Milwaukee, St. Louis, Cincinnati, Detroit, Cleveland, Buffalo, Boston, Philadelphia, Jersey City.



I'VE BOUGHT TONS OF IT—  
I OUGHT TO KNOW  
HOW GOOD IT IS!

Once you've used Lyonore Metal—have seen how easy it is to form—how long it lasts and how cheap per year of service, you'll recommend it for every job. Write for details about this remarkable alloy—and prices.



LYON, CONKLIN & CO. INC. BALTIMORE, MD.

## BELMONT IRON WORKS

PHILADELPHIA NEW YORK EDDYSTONE

Southern Sales Offices, Charlotte, N. C.  
**Engineers . Contractors . Exporters**

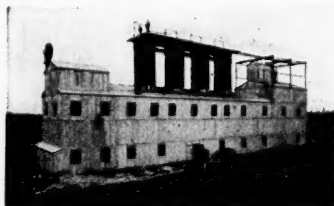
STRUCTURAL STEEL  
BUILDINGS AND BRIDGES  
RIVETED-ARC WELDED

BELMONT INTERLOCKING  
CHANNEL FLOOR

Write for Catalogue

Main Office—Philadelphia, Pa.  
New York Office—44 Whitehall St.

## STEEL BUILDINGS COST LESS!



Less in dollars and cents per square foot of floor space than any other permanent structure. Standardized design or "tailored-to-fit." Rigid, weather-tight. Quickly constructed by ordinary labor. Easily altered or relocated. Phone South 2040 for information.

MARYLAND METAL BUILDING COMPANY

RACE & McCOMAS STS. • BALTIMORE, MD.



OCTOBER NINETEEN THIRTY-SIX

# STRUCTURES THAT ENDURE



Salt treated sub-flooring laid on Creosoted stringers and nailing strips, each treated by our Pressure Process.

Statistics show that Wood, when used Untreated, is subject to deterioration through Dry Rot and Insect attack, resulting in costly Replacements and Repairs.

Eliminate the need for these expensive Replacements and Repairs by the use of Structural Timbers preservatively treated by our Pressure Processes with Standard, approved chemicals. Treated Wood has many times the life of Untreated Timbers and will give a lifetime of satisfaction with low maintenance costs.

Our Pressure Treating Plants are conveniently located to promptly serve you at advantageous freight rates.

Detailed Information, Prices and, if necessary, the services of one of our Engineers may be had without cost to you, by writing our territory Sales Office or communicating direct with

## THE WOOD PRESERVING CORPORATION

Koppers Building

Pittsburgh, Pa.

AYER & LORD DIVISION

Affiliate

CENTURY DIVISION

NATIONAL LUMBER & CREOSOTING CO.

### SALES OFFICES

Baltimore, Md. . . Boston, Mass. . . Charleston, S. C. . . Chicago, Ill.  
Columbia Park, O. . . Denver, Colorado . . Houston, Texas . . Kansas  
City, Mo. . . Marietta, O. . . Memphis, Tenn. . . Montgomery, Ala.  
New York, N. Y. . . Newport, Del. . . Philadelphia, Pa. . . Pittsburgh, Pa.  
Reed City, Mich. . . St. Louis, Mo. . . Superior, Wis. . . Texarkana, Ark.-Tex.



## Plant Expansion and Modernization

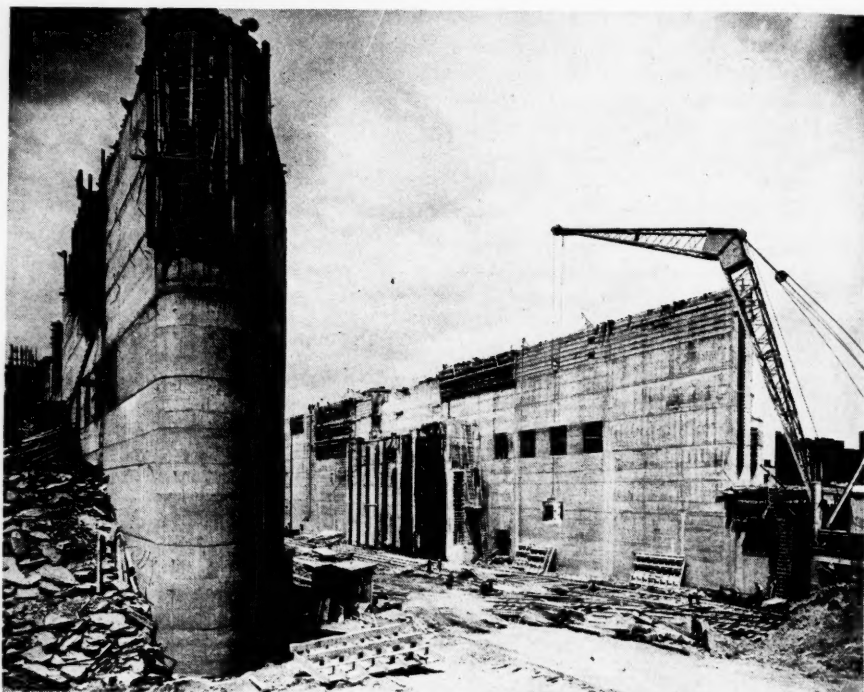
As economic conditions continue to improve, more business men are turning their attention to plant expansion and modernization plans. Prospective buyers of materials, supplies and equipment for new construction and rehabilitation work welcome the opportunity to investigate new methods, processes and mechanical improvements.

During the week of November 30, the 12th National Exposition of Power and Mechanical Engineering is to be held at the Grand Central Palace, New York City. More than 40,000 visitors are expected to attend this exposition which is of special importance to manufacturers, plant managers, superintendents, chief engineers, plant engineers, electrical engineers, consulting engineers and other buyers of plant equipment and supplies. General classification of the exhibits include power plant, heating and ventilating; air conditioning, refrigeration; electrical equipment; materials handling; power transmission; machine shop equipment; hand and machine tools; safety equipment; process equipment; plant maintenance; and building construction.

**Metal Statistics 1936**—The twenty-ninth annual edition of Metal Statistics, containing the same general assortment of statistical information on ferrous metals and non-ferrous metals and on miscellaneous economic subjects as has been supplied in earlier numbers, has been issued by The American Metal Market Co., New York City. B. E. V. Luty and N. J. Langer are the editors. The price of the publication is \$2.00.

## Pickwick Dam Lock Construction

Details of the navigation lock at Pickwick Landing Dam, TVA navigation and flood control project on the Tennessee River 53 miles below Wilson Dam at Muscle Shoals, Alabama. The lock is 67 feet high and is said to be the highest single lift of water in the world. The steel lock gates, consisting of four gate leaves, will require 1500 tons of steel and are being completed by the Birmingham plant of the Virginia Bridge Co.



### Water Purification Plants

*Any Type—Any Purpose—Any Capacity*

Dry Chemical Feed Machines  
Swimming Pool Filters

**E. W. BACHARACH & CO.**

Rialto Bldg.

Kansas City, Mo.

### FILTERS

Water Filters for Municipalities, Textile Finishing Establishments, Rayon Manufacturing Plants, Swimming Pools, Raw Water Ice Plants, Laundries, etc.

**ROBERTS FILTER MANUFACTURING COMPANY**

604 Columbia Avenue

Darby, Pennsylvania

### Filtration and Pumping Equipment

*For Water Works and Swimming Pools  
Sales and Installation*

**BURFORD, HALL AND SMITH**

140 Edgewood Avenue, N. E.,  
Atlanta, Georgia

### STEEL PLATE CONSTRUCTION TANKS STACKS DREDGE PIPE

Acid Tanks	Digestors	Jacketed Tanks	Settling Tanks
Breechings	Dryers	Molasses Tanks	Standpipes
Condensers	Filters	Oil Storage Tanks	Stillars
Coolers	Gasoline Tanks	Pressure Tanks	Vacuum Tanks

**LANCASTER IRON WORKS**

LANCASTER, PA.

### Bristol Steel & Iron Works, Inc. STRUCTURAL STEEL

*For Bridges, Buildings and All Industrial Purposes*

Steel Plate and Miscellaneous Iron Work  
Complete Stock Shapes, Plates, Sheets and Bars for  
Immediate Shipment

**BRISTOL, VIRGINIA-TENNESSEE**  
"SAVE WITH STEEL"

### CONVERSE BRIDGE & STEEL CO.

Chattanooga, Tennessee

*Structural Steel for all Industrial Structures,  
Buildings and Bridges.*

LARGE STOCK FOR IMMEDIATE SHIPMENT

### NORFOLK TANK CORPORATION

NORFOLK, VA.

Baltimore Rep: Allan U. Bevier Inc., American Bldg.

**STEEL PLATE FABRICATORS**

TANKS:			
Pressure	Water	Standpipes	Angle Rings
Truck	Process	Bins Hoppers	Dredge Pipe
Trailer	Storage	Stacks	Asphalt Equipment
		Pipe Coils	Industrial Specialties

### NEW YORK CENTRAL IRON WORKS

HAGERSTOWN, MARYLAND

*Steel Plate Fabricators*

**TANKS, PRESSURE VESSELS, STACKS, BREECHINGS, ETC.**

*Estimates cheerfully given.*

## VEN-ITE

THE MONARCH OF FLOORS



We contract to install guaranteed cement floors anywhere in the Country.

Either your job specifications, or a Ven-ite specification; figured optional with yourselves.

Ven-ite Floors embody several types as follows:

VEN-ITE HEAVY DUTY INDUSTRIAL FLOORS  
VEN-ITE CEMENT FLOORS FOR PUBLIC BUILDINGS  
VEN-ITE COLORED CEMENT FLOORS  
VEN-ITE SURFACED CEMENT FLOORS (TERRAZZO)  
VEN-ITE ACID PROOF FLOORS  
VEN-ITE BLACK TOP FLOORS

All work guaranteed against disintegration, dusting, and loose bond.

VEN-ITE COMPANY INCORPORATED  
250 South Broad St., Philadelphia, Pa.

## STRUCTURAL STEEL for BUILDINGS and BRIDGES

Capacity 1000 Tons per Month. 3000 Tons in Stock

Carolina Steel and Iron Company

The Largest Steel Fabricators in the Carolinas

Greensboro

North Carolina

S. C. Rep., Edward McCrady, 307 Allen Bldg., Greenville, S. C.

## AUSTIN BROTHERS BRIDGE CO.

Structural Steel and Ornamental Iron  
Bridges, Reinforcing and Guard Fence

ATLANTA, GEORGIA

Oakland City Station

SEWER PIPE  
CULVERT PIPE  
DRAIN TILE  
WALL COPING  
METER BOXES



FLUE LINING  
SEPTIC TANKS  
FIRE BRICK  
GRATE BACKS  
FIRE CLAY

We solicit your inquiries

LEE CLAY PRODUCTS COMPANY  
CLEARFIELD, Rowan County KENTUCKY

## SAND—GRAVEL—BRICK FILTER GRAVEL

Washed Sand and Gravel for Concrete  
Roads and Buildings

Filter Gravel, all sizes—Building Bricks

FRIEND & CO., INC. River St., Petersburg, Va.



## WILLIAMS • BUCKETS •

Power-Arm, Multiple-Rope and  
Dragline Types. Write for bul-  
letins.

THE WELLMAN  
ENGINEERING CO.

7003 Central Ave. Cleveland, Ohio

## TARPAULINS

Waterproof and Plain - - - All Sizes  
Immediate Delivery - - - Manufacturer's Prices  
Canvas in every weight for every use.

ATLANTA TENT & AWNING COMPANY  
Box 974 ATLANTA, GA.

## MASCOT CHATTS

ASPHALTIC ROADWAY GRAVEL  
ROOFING GRAVEL CRUSHED STONE  
ASPHALT FILLER DUST



American Limestone Co., Knoxville, Tenn.

## CRUSHED LIMESTONE Best for All Purposes

We manufacture all sizes of stone suitable for all  
classes of road building and concrete work where  
only a high-grade limestone is required.

Quarries opened up in 1912.

Capacity 8000 tons daily.

Four Quarries

Blue Ridge, Va. Pembroke, Va. Pounding Mill, Va.  
Boxley, Greenville County, Va.

W. W. BOXLEY & COMPANY

Room 711, Boxley Building, ROANOKE, VA.

### QUINN PIPE FORMS

HAND or WET PROCESS

Make concrete pipe on the job with  
Quinn Concrete Pipe Forms. Get com-  
plete information on prices and special  
construction features of Quinn Forms.  
Give us size of job for estimate on  
your pipe form needs.

### HEAVY DUTY MEDIUM DUTY

Built for more years of service  
—sizes for any diameter pipe  
from 12 to 84 inches — any  
length—tongue and groove or  
bell end.

Also manufacturers of concrete pipe machines for making pipe  
by machine process.

Makes same sizes pipe as  
"Heavy Duty" but built to  
meet demand for lower cost  
equipment to produce uniform  
quality in smaller amounts.

QUINN WIRE & IRON WORKS 1605 12 St. Boone, Iowa

## GLAMORGAN PIPE & FOUNDRY CO.

LYNCHBURG, VA.

Manufacturers of  
Cast Iron Pipe and Fittings  
For Water and Gas Service



## South Penalized by Adverse Freight Rate Differential

(Continued from page 39)

over production in some principal crops.

The payroll of the Southern textile industry far exceeds that of any other industry in this section. In the operation of these plants, approximately 4,000,000 bales of cotton are purchased each year from the farmers; approximately 2,000,000 tons of bituminous coal are purchased from the mining industry for use as fuel in operating the plants; various machinery, equipment and supplies of every description are used in the maintenance and operation of these factories, on all of which there accrues to the railroads or other transportation agencies revenue for the movement of such products to these textile mills. After the goods are produced, the manufactured articles are subject to the payment of additional revenue to cover the transportation to the consuming markets. Consequently, the prosperity, continued operation and expansion of these manufacturing industries is of vital interest to the South including its citizens engaged in the farming or mining industry benefiting from the sale of products to these factories, labor employed in the factories to convert the goods into finished products and the railroads and motor carriers receiving the revenue for the transportation of the inbound materials and the outbound manufactured products.

The railroads and other transportation

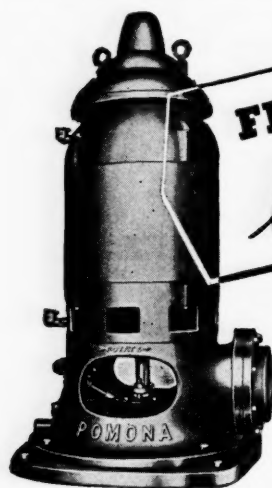
agencies in the Southern territory are in need of traffic, especially high-grade traffic, such as manufactured products, on which the transportation charge is relatively higher than that received on raw materials, such as forest products, mining or agricultural products. In order to afford efficient and reliable transportation service for the movement of all products of the South and to facilitate the flow of commerce generally, it is very vital to the interest of the Southern rail carriers that there be in these states a full development of industries engaged in the manufacture of these products. The annual production of woven cotton cloth in the Southern mills is approximately 1,750,000,000 pounds, for all of which transportation service is required and revenue paid thereon to the transportation agencies.

The transportation problem of the Southern textile industry is made more difficult by the location of its principal competitors in the Eastern and New England states much nearer to the large consuming markets in that section and much closer to the ports with low transportation rates available via steamer lines. In order to distribute the product of Southern mills to the most important market in the East, it is necessary to overcome or modify the disadvantages resulting from the long distances to the markets, by maintaining the fastest possible transportation service at the lowest possible transportation cost and such relationship of rates that will reflect the lowest possible differential over the rates applied for competitive movements from the shorter distant Eastern mills.

If the transportation cost from the South to the chief consuming markets is relatively higher than from the North,

the Southern shippers can forward raw materials, and manufactured goods, to these large Northern markets only by absorbing in their costs these differences in transportation charges. This is distinctly unfair to Southern producers of raw material and Southern manufacturers of finished products. Southern producers and manufacturers should not be called upon to offset this disadvantage in transportation costs by reducing production costs in the South. Such a course would be detrimental to the economic welfare of the Southern states.

In recognition of the fundamental right of all sections of the country to equal treatment it has been uniformly held that one of the primary purposes of the Interstate Commerce Act is to avoid preference, and to compel the carriers to give equal treatment to all and to place all shippers upon equal terms. These principles have been recognized in the decisions of the courts in various cases including NYNH&H Railroad Company v. ICC 200, U. S. 361; L&N Railroad Company v. Mottley, 219 U. S. 467; United States v. Union Stock Yards, 226, U. S. 266, and yet some of the decisions of the Commission indicate a belief that the provisions of the present law are such as not to give that body full rein always to prescribe rates which its judgment might dictate, and that it is not as free as it should be in dealing with these interterritorial problems. If the present provisions of the Interstate Commerce Act do not enable the Commission to require the railroads to participate in competitive rates and to accord equal consideration to the competitive movement of traffic from all sections, appropriate legislation should be enacted to insure the application of correct principles in the making of freight rates.



**FIRST COST  
IS  
last COST**

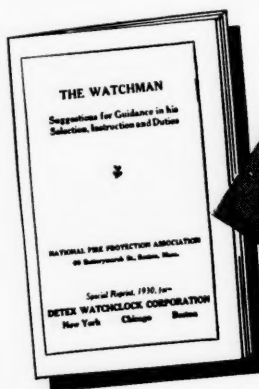
You will never hear Pomona Pump owners say, "It's not the first cost, it's the upkeep." Pomona Pumps are engineered and built for a lifetime service. When installation and operating cost are amortized over their many years of troublefree operation, cost per day becomes unbelievably

low. You won't find this inexpensive daily overhead with cheap, poorly engineered pumps. Why? Because with the purchase of such a pump, maintenance expense begins. With a Pomona, the first cost is the last cost. But don't take our word for it or even that of a Pomona salesman. Ask any of the Pomona users in your neighborhood what pump they'd buy if they had to do it over again—then you will want to get in touch with a Pomona representative. Send today for your copy of a brand new bulletin featuring things you should know about hydraulic laboratory tests.

### POMONA PUMP CO.

53 W. Jackson Blvd., Chicago • 206 E. Commercial St., Pomona, Cal.  
101 Marietta Bldg., Atlanta, Georgia

### POMONA TURBINE PUMPS



You may find an element in this book not covered in your fire insurance policy...

## DETECTION

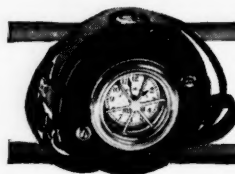
THIS little book "The Watchman" shows how to handle and route watchmen so as to provide maximum protection from fire. It summarizes the proven practice that has made watchmen properly checked by watchmen's supervisory systems the advance guard of fire detection that precedes all other elements of fire insurance and fire protection.

WITH it will also be sent folders that show you why Detex Watchclock Systems have become, by far, the most generally used for supervising watchmen.

ASK for "The Watchman." It will be sent on request to anyone interested.

### DETEX WATCHCLOCK CORPORATION

4151 Ravenswood Ave., Chicago, Ill.  
15 Beach Street, Boston



**DETEX**

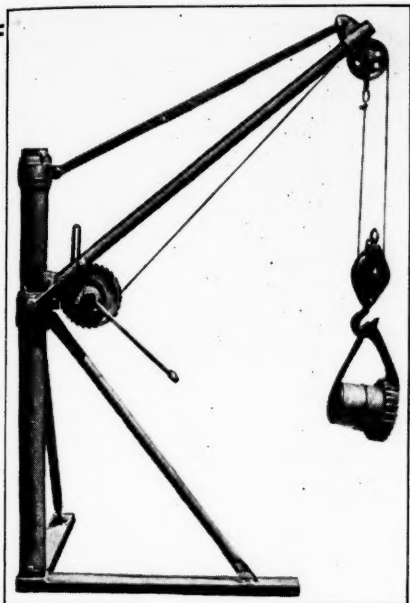
MR-10

62 Varick Street, New York  
Room 801, 116 Marietta St., Atlanta

MANUFACTURERS RECORD FOR



## HAND-E-HOIST



A small portable hoist with the boom swinging in full circle; equipped with load brake. Boom can be raised and lowered.

Capacity (2 men and with a 2 part line) 1000 lbs.

Capacity can be increased by adding another hoist block in the line.

Hoist made of steel and semi-steel throughout.

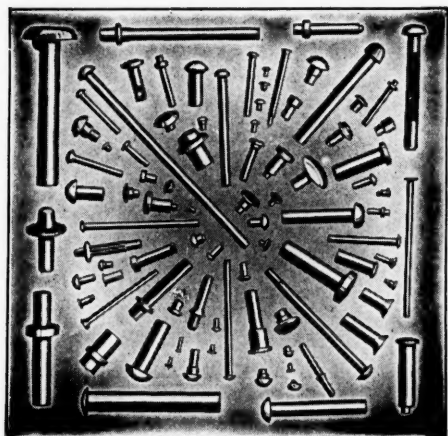
Total weight 200 lbs.

Shipped complete with cable and sheaves for a 2 part line.

DEALERS WANTED—PRICE ON APPLICATION

## TONAWANDA ENGINEERING CORP.

TONAWANDA, N. Y., U. S. A.



## MACHINE SCREWS

Hexagon and Square Iron and Brass Nuts.

Interchangeable Bolts and Nuts (Promco Brand) Special Screws and quality Rivets to order.

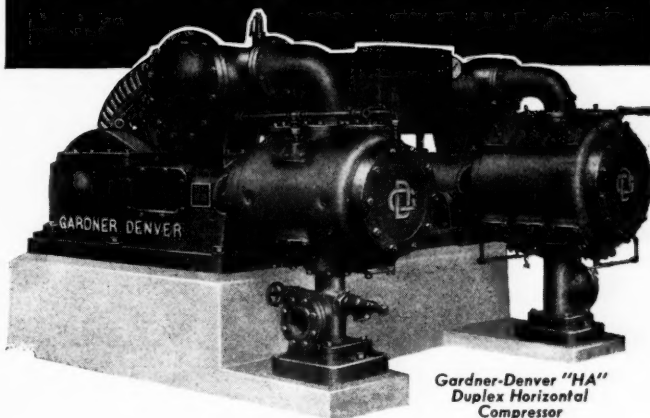
Submit samples and advise as to quantity.

Catalog for the asking.

THE PROGRESSIVE MANUFACTURING CO.

TORRINGTON, CONN.

## Valves That IMPROVE with Use



Gardner-Denver "HA"  
Duplex Horizontal  
Compressor

## -- Just Another Reason for Insisting on a Gardner-Denver Air Compressor!

Cushioned Duo-Plate Valves—an exclusive feature in Gardner-Denver Horizontal Compressors—actually become tighter with use, and do not wear in the seats. Because of their light weight and low lift, these valves reduce closing impact to a minimum. No flexing or sliding motion to cause breakage.

But there are many other reasons why the Gardner-Denver "HA" Compressor is a better buy today. Timken tapered roller main bearings, for instance. Nickel-alloy iron cylinders for long wear. Better balanced performance . . . smoother operation . . . sustained high efficiency.

Write us for operating data on Gardner-Denver "HA" Compressors. It will pay you to know all the facts.

SINCE 1859



GARDNER-DENVER COMPANY

102 Williamson Street

Quincy, Illinois

SOUTHERN OFFICES: Atlanta, Ga.; Birmingham, Ala.; Charleston, W. Va.; Knoxville, Tenn.; Houston, Texas; Dallas, Texas

## GARDNER-DENVER

## Social Security Act

(Continued from page 34)

reaches the age of 65, or on January 1, 1942, whichever date is later, and continue during the remainder of his life. The amount of the pension depends upon the total wages received by the beneficiary between December 31, 1936, and the end of the 65th year. The rates are one-half of one per cent on the first \$3,000 of such wages, one-twelfth of one per cent on the amount between \$3,000 and \$45,000, and one-twenty-fourth of one per cent on any amount in excess of \$45,000. The maximum monthly pension is fixed at \$85. At these rates only such laborers as had received \$129,000 in wages between December 31, 1936, and the end of their 65th year would be entitled to the maximum pension of \$85 a month. In other words, they must have received \$3,000, the maximum yearly amount on which the pension can be computed, for no less than 43 years.

The first payments under the Federal old age benefit section will be made on January 1, 1942. In preparation for future old age benefits "an old age reserve account" is set up under control of the Secretary of the Treasury. Into that fund, beginning with the current fiscal year, an amount must be paid sufficient to provide for the old age benefits on recognized actuarial principles. In the course of years this fund will amount to many billions of dollars. Such a fund is entirely unnecessary. After the plan has been running sufficiently long to bring a maximum number of people under the

benefits of the pension, the amount needed to meet the pensions will vary from year to year extremely little. With a huge fund and a stationary pension roll the plan set up in the Act would amount to adding a certain number of billions of dollars to the fund every year to keep it intact and subtracting from the fund the same number of billions of dollars to pay current indemnities. Obviously when the pension roll is nearly stationary annual appropriations needed to meet that roll are also nearly stationary. In the meantime the enormous reserve fund, which, from the practical point of view, can be invested only in obligations of the Federal Government, will promote reckless extravagance on the part of the Government.

"Taxes with respect to employment" levied under title 8 of the Security Act, are obviously intended to furnish funds out of which the enormous old age benefit surplus is to be built up. However, there is nothing in the Act which requires the proceeds of that tax to be paid into the old age reserve account and nothing which limits such appropriations by the Government to the amount realized from the tax. If the tax does not yield enough to meet the requirements of the actuaries appropriations must be made out of other funds in the Treasury. Whether or not the tax on employers of eight or more and the taxes with respect to employment yield sufficient revenue to finance unemployment compensation and old age pensions, they are of such magnitude as to be staggering to an industry faced with abnormally large labor costs like the bituminous coal mining industry.

## More National Forests

**A** NEW national forest, the Croatan, in the tidewater and coastal plains region of North Carolina, and the Homochitto National Forest Purchase unit in southwestern Mississippi have been established by Presidential proclamation.

The Croatan forest includes about 306,000 acres in Carteret, Craven and Jones counties, of which 113,000 acres have been bought or are in the process of purchase by the United States.

The Homochitto forest includes sections of land in Adams, Amite, Copiah, Franklin, Jefferson, and Lincoln counties. Of the gross area of 373,450 acres, 187,000 acres have been bought or in process of purchase by the United States. A number of small saw mills operate in the vicinity. There are also possibilities for contributing supplies of pulpwood for Southern paper mills. New roads, look-out towers and firebreaks are being built.

Mississippi now has four national forests: the Homochitto, the De Soto, Holly Springs, and Bienville. Land is being purchased in the Delta and the Biloxi purchase units, which will become national forests it is expected, as soon as sufficient land is acquired.

### "STEEL JOIST CONSTRUCTION"—

Handbook—36 pages, revised edition, presenting engineering standards and the code of Standard practice of the Steel Joist Institute, covering the design and application of open web steel joists of both the all-steel and nailer types together with safe load tables for each type.

Steel Joist Institute, Chicago, Ill.

1905
**Strand**
1936

**FLEXIBLE SHAFT MACHINES**  
FOR MANY OPERATIONS  
**YOU CAN'T GO WRONG WITH THE STRAND**

Type M 5



Type M 2



**THEY MAKE GOOD**  
**MANY TYPES AND SIZES**  
**1/8 to 2 H.P.**  
**HORIZONTAL**  
**OR**  
**VERTICAL**  
**SEND FOR CATALOG**  
Manufactured By  
**N. A. STRAND & CO.**  
5001-5009 N. Lincoln St., Chicago, Ill.

## Diesel and Gas Engines from 30 to 1250 H. P. for Every Power Need

2 AND 4 CYCLE — VERTICAL AND HORIZONTAL SIZES

### THE COOPER-BESSEMER CORPORATION

MT. VERNON, OHIO — PLANTS — GROVE CITY, PA.

25 W. 43rd St., New York, N. Y.  
Magnolia Bldg., Dallas, Texas  
Esperon Bldg., Houston, Texas  
Mills Bldg., Washington, D. C.

640 E. 61st St., Los Angeles, Cal.  
201 E. 1st St., Tulsa, Oklahoma  
225 Crockett St., Shreveport, La.  
Gas, Power & Equipment Co.,  
Birmingham, Alabama



## PRECISION CASTINGS

of  
Iron, Brass, Bronze, Aluminum,  
Nickel, Silver.

We solicit your inquiries on difficult  
shapes requiring extreme accuracy

MODERN PATTERN AND MACHINE SHOPS.

THE

**RICHMOND**

FOUNDRY & MANUFACTURING CO., INC.

RICHMOND, VIRGINIA.

"A Dependable Source of Supply"

## LET US BE YOUR FACTORY

We have plant and equipment for  
machining parts, building assemblies,  
complete units and machines.

### HEAT TREATING AND GRINDING

Let us furnish quotations on your products.

### GENERAL MACHINE WORKS

York, Pa.

# LINK-BELT

**CHAINS - SPROCKETS  
ANTI-FRICTION PILLOW BLOCKS  
POWER TRANSMISSION EQUIPMENT  
ELEVATORS AND CONVEYORS**

Send for General Catalog No. 600

**LINK-BELT COMPANY**

Atlanta, 1116 Murphy Ave., S. W.

Baltimore

Dallas

New Orleans

Offices in Principal Cities

5580-A



## PERFORATED METAL

of every sort

for Screening, Grad-  
ing, Ventilating or  
any industrial pur-  
pose. Also Grilles  
of many beautiful  
designs.

5631 Fillmore St., Chicago, Ill.

New York Office: 114 Liberty St.

**The Harrington & King**  
PERFORATING CO.



No. 1

**MANHATTAN  
PERFORATED METAL CO., INC.**

43 17-37th Street, Long Island City, N. Y.

**PERFORATORS**

of All Kinds of Metals for All Industries  
Write for Copper, Brass, Tin, Zinc or  
Aluminum Catalog



No. 7



No. 3



No. 22

## MUNDT PERFORATED METALS



Any metal, any size, any perforation, for  
any use. Large stock available  
for urgent need.

65 years' experience enables us to give  
superior service. MUNDT'S customers are  
always satisfied.

**Charles Mundt & Sons**

490 JOHNSTON AVE., JERSEY CITY, N. J.



## ERDLE PERFORATED METALS



For Cotton Gins, Cotton  
Seed Oil and Peanut clean-  
ing and Grading. We so-  
licit your inquiries.

**Erdle Perforating Co., 171 York St., Rochester, N. Y.**

## CLAY WORKING MACHINERY

For Brick, Tile and Block,  
from smallest to largest capacity.

Write for information

**J. C. STEELE & SONS.**

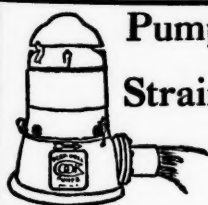
STATESVILLE, N. C.

## TURBINE WATER WHEELS

MANUFACTURED BY

**DAVIS FDY. & MCH. WORKS**  
ROME, GA.

ESTABLISHED 52 YEARS



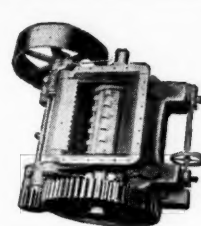
**Pumps—Deep-Well Plunger and  
Turbine**

**Strainers—and other well supplies**

**WATER PRESSURE SYSTEMS**

**A. D. COOK, Inc.**

Lawrenceburg, Indiana



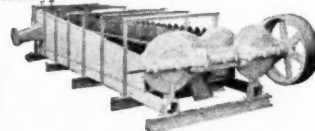
## McLANAHAN EQUIPMENT

**CRUSHERS**

Single and double roll and jaw crush-  
ers, hammer mills, super dry pans—  
steel log washers and scrubbers, sand  
drags, revolving and vibrating screens,  
elevators, conveyors, dryers, jigs,  
hoists.

**SCREENS**

Complete portable, semi-  
portable and stationary  
crushing, screening and  
washing plants for different  
capacities of any materials.



**McLanahan & Stone Corp.**

Established 1835  
HOLLIDAYSBURG,  
PENNSYLVANIA

**FOR THEIR GREATER SERVICE  
USE**

## SHIMER SUCCESS PLANING MACHINE KNIVES AND BITS,

Surfacing Knives and many Knives of smaller  
proportions for special duty in wood cutting.  
It will be to your advantage to look into this  
feature of our service. Our prices, too, are very  
attractive if you take in consideration their extra  
wear.

**Samuel J. Shimer & Sons, Inc.**  
MILTON, PA.

## CANNING MACHINERY

**For Fruits, Vegetables,  
Seafoods, etc.**

**WE ARE MANUFACTURERS**

— WRITE FOR CATALOG —

**A. K. ROBINS & COMPANY, Inc.**

BALTIMORE, MD.



## Possible Freight Car Shortage

Increased Coal Production and Greater Demand

WITH continued improvement in general business and a gain in railway car loadings, a possible freight car shortage is likely to develop. Some sections and industries are feeling the effects of the greater demand for cars despite an anticipated smaller demand for cars to move agricultural production.

In commenting on the Fall production and coal car supply, the National Coal Association says that the bituminous coal production held up remarkably well during the summer and is running about 27,000,000 tons ahead of the same period in 1935. All indications point to a Fall and Winter season of good demand. The danger of a coal car shortage and the uncertainties in the labor situation are stimulating factors in increasing coal stocks for industrial use.

With these prospects in view the question naturally follows, will the railroads be able to furnish sufficient equipment in which to move coal? With steel mills operating at over 72 per cent of capacity, road building and other construction active, general business activity increasing, the five-day week and many other factors entering into the situation, it seems inevitable that there will be a car shortage in some, if not many, localities. Some of the railroads have been allocating cars. The ownership of open top cars (all of which are not adaptable to coal loading)

on August 1 totaled 793,369, compared with 816,468 on August 1, last year. Of this total 17.3 per cent were in need of repairs. Whether or not these local car shortages will reach serious proportions depends upon the rapidity with which rail carriers are able to move the cars and upon the figure which the peak production of coal reaches. A 190,000 car week is anticipated by the railroads and means rail shipments of 9,500,000 tons. The present equipment of the rail carriers is said to be insufficient to handle this quantity of coal.

## American Railway Development Association

The program for the Twenty-Eighth annual meeting of the American Railway Development Association at the Statler Hotel, Detroit, Mich., October 8-9, covers various subjects of interest, including industrial, agricultural, marketing, colonization, real estate, and public relations topics. At the general session on the morning of October 8, Prof. H. C. Rather of Michigan State College, Lansing, will address the meeting on the subject of "Flax," while John Haw, director of agricultural development, Northern Pacific Railway, St. Louis, will discuss the subject of "General Land Use Considerations Applicable to Western United States." During the luncheon C. A. Radford, Publicity Manager, Cleveland, Cincinnati, Chicago & St. Louis Railway, Cincinnati, Ohio, will talk on the subject of "Publicity." Other speakers during the two-day

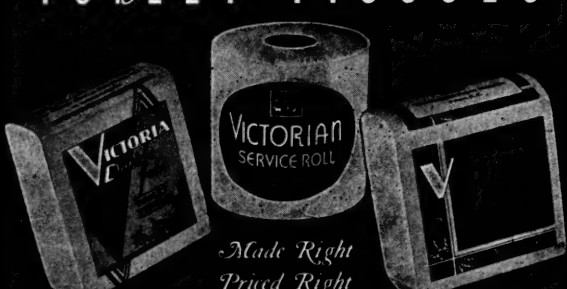
sessions will include Dr. Edsel A. Rudiman, Soy Bean Department, Ford Motor Engineering Laboratory, Detroit, Mich.; George C. Smith, Assistant to the President, Missouri-Kansas-Texas Lines, St. Louis; Dr. E. S. Archibald, Director, Central Experimental Farm, Department of Agriculture, Ottawa, Ontario, Canada; W. W. Ropa, Industrial Agent, Wabash Railway Co., St. Louis; Earle G. Reed, Supervisor Agricultural Development, Union Pacific Railroad, Omaha, Neb.; B. T. Abbott, Agricultural Agent, Illinois Central System, Jackson, Miss., and J. F. Jackson, General Agricultural Agent, Central of Georgia Railway, Savannah, Ga. In addition there will be ten-minute talks by a number of other speakers.

## Annual Meeting of Mechanical Engineers

As a part of the American Society of Mechanical Engineers' annual meeting in New York City, November 30 to December 4, a symposium on Corrosion Resistant Metals in Design of Machinery and Equipment will be featured. T. H. Wickenden, past chairman of the Society's Iron and Steel Division, is chairman of the committee arranging the symposium. Papers to be presented are as follows: Introduction to Corrosion Resisting Metals—Dr. F. N. Speller, National Tube Co., Pittsburgh, Pa.; Alloys of Aluminum—E. H. Dix, Jr., Aluminum Company of America, New Kensington, Pa.; Nickel and Nickel-base Alloys—F. L. LaQue, The International Nickel Co., Inc., New York, N. Y.; Zinc in the Chemical Industries—E. A. Anderson, The New Jersey Zinc Company, Palmerton, Pa.; Lead—G. O. Hiers, National Lead Company, Brooklyn, N. Y.; Cast Iron in Chemical Equipment—Dr. H. L. Maxwell, E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.; Copper and Copper-base Alloys—R. A. Wilkins, Revere Copper and Brass, Inc., Rome, N. Y.; Corrosion Resistant Steel (Stainless Type)—J. H. Critchett, Union Carbide and Carbon Research Laboratories, Inc., New York, N. Y.

# Victoria

## TOILET TISSUES




*Made Right  
Priced Right*

VICTORIA SINGLE FOLD: White, absorbent, sanitary. 1,000 single fold sheets, 4 1/8" x 5", for dispensing two sheets at a time from cabinets. . . . VICTORIA DOUBLE FOLD: High grade, silky, sanitary tissue—white, manila or full bleached. 1,000 interfolded sheets, for dispensing two sheets at a time from cabinets. Three sizes. . . . VICTORIA SERVICE ROLL: Pure, white, silky in texture. 1,000 sheets, 4 1/8" x 5". A high quality toilet tissue, reasonably priced.

*Let us send you samples and prices*

### VICTORIA PAPER MILLS COMPANY

FULTON, NEW YORK

Founded  1880

# SALES HARMONY

## IN CO-ORDINATED PACKAGING



AS a Symphony Orchestra is melodious to the ear, a harmony of color and design is pleasing to the eye. Keep unity in mind when you pack your products. Have your labels, seals or bands, and boxes, of identical color and style and you will have a melody of effective advertising and greater sales.

Economy in art work and engravings is also made possible through "CO-ORDINATED PACKAGING."

A complete Art Department is maintained to create individual designs to fit your packaging requirements. Allow us, at no cost or obligation, to submit suggestions for your complete packaging.

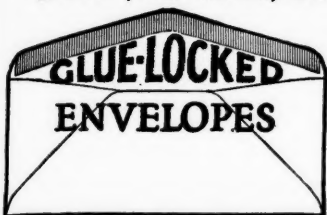
**Old Dominion Box Co., Inc.**  
Lynchburg, Va.  
Winston-Salem, N. C.  
Pulaski, Va. Asheboro, N. C.  
Burlington, N. C. Charlotte, N. C.

## Old Dominion Paper Boxes

MANUFACTURERS RECORD FOR

# ENVELOPES

Direct from Manufacturer to Consumer



PLAIN and  
PRINTED  
All Sizes  
and Styles

## OLES ENVELOPE CORP.

2510 Loch Raven Road, Baltimore, Md.  
Sales Offices, Washington, D. C., Atlanta, Ga.



While cosmopolitan in its general appeal, and modern up to this moment in its equipment, there is a peculiar flavor of The Old South here which Southerners are quick to note and appreciate. They feel at home and come back to us again and again.

Rates \$3.00 per day and up. Every room with bath or shower.  
Centrally located.

### The Southern Hotel

BALTIMORE

## THE OSCAR T. SMITH & SON CO.

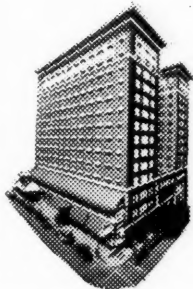
Manufacturing

### BANK AND COMMERCIAL STATIONERS

407-9-11 E. Saratoga Street  
BALTIMORE, MD.

CHARACTER ——— SERVICE ——— QUALITY

A Hearty Welcome Awaits You  
**HENRY GRADY HOTEL**



550 rooms of comfort and convenience.

Each room has ceiling fan, circulating ice water, radio and either shower or tub bath; corner rooms have both.

Open Dining Terrace and Coffee Shop.

REASONABLE RATES  
**ATLANTA, GA.**

Peachtree St. J. F. de Jarnette  
At Cain Vice-Pres. & Mgr.

TO meet demands on physical and mental strength, business men carrying unprecedented burdens must keep robust, refreshed, clear eyed, keen and alert. Good health is the nation's greatest asset.

The HIGHLAND PINES INN offers unsurpassed hospitality in a charming Southern atmosphere among congenial people; giving mental stimulation and physical refreshment outdoors from the bracing, pine-laden air and warm sunshine.

Rain or showers seldom interfere with continuous outdoor life as the sandy soil promptly absorbs all moisture and the pine trees drink in whatever may remain in the air.

Southern Pines is only 9 hours from Washington; 13 hours from New York; 20 hours from Boston and only halfway between New York and Florida on the main line of the S. A. L. Ry. with through Pullman service.

## An Ideal WINTER RESORT

DECEMBER TO MAY

### HIGHLAND PINES INN

SOUTHERN PINES, N. C.

Golf—Polo—Riding—Tennis—Racing—Hunting—  
Canoeing—Motoring





## FOR Disinfectants Insecticides and Soaps

**N**ot many years ago disinfectants were unknown, and soap was scarce. But today, as a result of concerted research, these necessities of life are within reach of everyone. In the soap, disinfectant, insecticide, and deodorant industries, Hercules Powder Company is an important factor through its research in the use and production of economical and efficient raw materials. Some of these include: pine oil, rosins, resins, and other soap and disinfectant basic materials. Information about the use of these and other Hercules products can be obtained by mailing the coupon.

● Some Hercules Products: Cellulose Products... Rosin, Rosin Derivatives, Spirits of Turpentine, Pine Oil... Chemical Cotton... Paper Makers Chemicals... General Industrial Chemicals... Commercial Explosives, Sporting Powders.

● Some Industries Using Hercules Products: Textile, Paper, Construction, Plastics, Metallurgical, Disinfectant, Insecticide, Paint, Varnish, Lacquer, Soap, Synthetic Fibres, Mining, Quarrying, Foundry, General Chemicals.

## Send for Booklet

HERCULES POWDER COMPANY  
INCORPORATED

Wilmington, Delaware

Please send booklet describing your products

for.....

Name.....

Address.....

Company..... IN-44-M



## \$142,000,000 Spent for Materials and Equipment on 59,000 WPA Con- struction Projects

More Than \$33,000,000 in the South

**S**INCE the Works Progress Administration began to function, more than 59,000 individual construction jobs have been undertaken. Over \$142,000,000 has been expended for materials, supplies and equipment from Federal funds.

Federal expenditures out of Federal funds, available for tabulation by States, for the Southern area amount to more than \$33,000,000.

Alabama .....	\$3,687,424
Arkansas .....	1,167,028
Florida .....	2,435,386
Georgia .....	2,312,017
Kentucky .....	1,778,999
Louisiana .....	2,163,598
Maryland .....	2,613,738
Mississippi .....	1,909,336
Missouri .....	2,495,490
Oklahoma .....	3,649,913
South Carolina .....	774,569
Tennessee .....	2,336,565
Texas .....	2,946,452
Virginia .....	1,038,397
West Virginia .....	2,168,200

In addition to these expenditures for materials from Federal funds supplied through the Works Progress Administration, counties, cities, towns and other local agencies have made large expenditures for materials and equipment, which expenditures are not included in the state totals given. It is the general rule that from 10 to 20 per cent, and sometimes more, of expenditures for materials on WPA projects are borne out of state, county, city and other non-Federal agencies. The total sum of these expenditures, on which information is not presently available on most projects, far exceeds expenditures for materials from Federal funds. This is obviously true for the reason that in the setting up of the major portion of the WPA projects the sponsoring agencies are required to supply the funds for material and supervision, while Federal funds are supplied through the WPA for labor costs.

Of the Federal expenditures for materials, supplies and equipment for the country, approximately \$45,952,000, or 32 per cent, went for supplies for roads, bridges and streets; about \$27,297,000, or 19 per cent, for public building materials; \$24,065,000, or 17 per cent, for materials for water supply and sewer systems; \$20,601,000, or 14 per cent, for supplies and equipment for park and playground projects; \$6,817,000, or 5 per cent, for materials for flood control and other conservation work; \$4,156,000 for supplies and equipment for airport and transportation projects, and about .5 per cent of the gross amount went for electric utility and housing materials. Approximately 10 per cent of the expenditures for materials bought for projects other than building and construction, are not included.

Lumber, cement, concrete, brick, stone, glass, paint, varnish, crushed stone, sand and gravel cost \$71,961,000, or more than 50 per cent of the total expended for materials and equipment. Iron and steel products called for the expenditure of \$33,355,000, or about 23 per cent of the total. These included cast iron pipe and fittings, structural and reinforcing steel,

plumbing equipment and supplies, heating and ventilating equipment and supplies, and tools, excluding machine tools. Petroleum products, which include paving materials, cost \$14,772,000, or 10 per cent of the total amount spent for materials.

Machinery and equipment amounted to \$5,312,000, or 3.7 per cent. Motor trucks, paving machinery and electrical equipment were included in this classification.

Some 6,200 school buildings have been repaired or constructed: 130,000 miles of road have been constructed or improved; and work has been done on 550 airports, more than 5,000 sewer systems, 2,200 water conservation and irrigation projects, more than 5,700 recreational and similar projects, and others. As WPA funds had to go for the unemployed on relief, many projects were selected primarily to give work to these people, rather than to build elaborate improvements; in many cases desirable projects were turned down because of lack of skilled labor on relief in the particular locality.

## Paramount Issues

(Continued from page 60)

being really capable personalities, not afraid of taking responsibilities or of hard work.

Your article setting forth the facts discovered by the Commission of Europeans regarding our "American Plan," also deserves a wide circulation among readers.

Wm. H. Savery.

## One of Industry's Best Customers

NORFOLK AND WESTERN RAILWAY CO.

Roanoke, Va.

Editor, MANUFACTURERS RECORD:

I have read with much interest the article on "The Buying Power of Southern Railroads" appearing on page 28 of your September issue, which shows aggregate estimated expenditures of more than \$1,100,000,000 during the year.

The article shows the importance to the whole country of having healthy railroads in order that they may continue to be the best customers of industry generally.

A. C. NEEDLES, President.

## Would Not Be Without It

ARKANSAS & LOUISIANA MISSOURI  
RAILWAY COMPANY

Shreveport, La.

Editor MANUFACTURERS RECORD:

The Arkansas & Louisiana Missouri Railway through our General Freight Agent, Mr. J. H. Shaw, has been a subscriber to your magazine for many years and would not be without it.

R. F. HUMBLE, Vice President.

**Chemical Engineering Catalog**—The twenty-first annual (1936) edition of Chemical Engineering Catalog, has been issued by the Reinhold Publishing Company, 330 West 42nd St., New York, successor to the Chemical Catalog Co., Inc. It presents condensed and standardized data on equipment, machinery, laboratory supplies, heavy and fine chemicals and raw materials used in industries employing chemical processes of manufacture. There is also a Technical and Scientific Books section which lists books in English on chemical and related subjects.

MANUFACTURERS RECORD FOR



# GOVERNMENT COSTS EQUAL

## *one-third of all your pay*



**"What! One third of all my pay for government?"**

**O**F COURSE! Perhaps you didn't realize it. It's an expensive business running the national, state and local governments—the way spendthrift politicians waste YOUR money!

The cost equals almost  $\frac{1}{3}$  of all you earn, but that is supposed to be a secret. That's why they *hide* your taxes! Take bread for example. 53 taxes are in every loaf. As for gasoline—40 to 60% of the price you pay goes for taxes.

The tax bill is so great EVERYBODY has to pay—the rich and the poor. (All the riches of all the rich people in the country wouldn't pay one year's taxes!) You just can't get away from it.

One third of your weekly pay will keep on going for government unless you do something about it.

### WHAT TO DO

Our annual taxes can be less, because the cost of government can be reduced.

It has been estimated that the true economy of statesmen, not the spending of self-seeking politicians, would reduce the nation's tax bill by BILLIONS of dollars. And, without sacrificing good government! We would still have money for ALL needed relief—all important projects.

It's up to you to bring your taxes down—by putting a stop to endless EXTRAVAGANCE and waste.

So make this resolution and keep it:

*"I resolve to oppose every officeholder who cannot prove to me that he has used all his influence to reduce the cost of government."*

Remember this resolution. You have all the power. You alone can oust political spendthrifts and put clear-headed lawmakers in their places.

### ACT TODAY

Don't wait. You can stop tax wasting QUICKLY! Write these three letters. Mail them today:

One to your MAYOR (or the County Clerk, if you live in the country). One to your GOVERNOR. One to the PRESIDENT.

Write only one sentence in each letter and sign your name and address. Say: *"I want the cost of government reduced!"*

**BUT DO IT TODAY!** It's your job, Mr. and Mrs. Public. You alone can protect yourself. Don't fail. Let the wasteful spender know his game is up. Let's all help give America back to the people!

**Write this letter today!**

**"I want the cost of Government REDUCED!"**

MAIL COPIES OF IT TO:

- 1 Your Mayor (or your County Clerk)
- 2 Your Governor
- 3 The President of the United States

**REGISTER—VOTE—**Give your support to candidates, regardless of party, who **WILL** cut the waste out of government.

Space for this message is provided by **MANUFACTURERS RECORD** because of a firm conviction that a reduced cost of government is vital to the interests of all its readers



# RESALE DEPARTMENT

## MACHINERY EQUIPMENT SUPPLIES



### Gregory Hi-Grade Rebuilt Motor & Machinery Bargains

#### MOTORS ALL STANDARD MAKES & SIZES AC & DC

Also— Generators  
Motor-Generator Sets  
Air Compressors  
Arc Welders  
Oil Cooled Transformers

KVA	2200 v. pri.	110/220 v. sec.	Make	Gen. Elec.	H
5	Westghse	S	37½	Westghse	N
10	Gen. Elec.	H	37½	Westghse	N
20	Moloney	HE	40	Gen. Elec.	H
25	Gen. Elec.	H	50	Gen. Elec.	H
25	Westghse	N	75	Gen. Elec.	H
25	Moloney	HE	150	Gen. Elec.	H
30	Gen. Elec.	H	100	Westghse	S

SAVE MONEY — WRITE OR WIRE

**GREGORY ELECTRIC CO.**

1600 So. Lincoln St. Chicago

### Engine Generators

1—100 K.W. Gen. Elec., 220 volt, d.c. to Ames 16"x14" Automatic Engine—Baker Vaportight valve.

1—75 K.W. Burke, three-wire d.c. to Harrisburg Unaflow Engine.

1—75 K.W. Allis Chalmers 240 volt, d.c. to Skinner 15"x15" Univalve Unaflow Engine.

All units direct current.

Can be bought "as is" or thoroughly reconditioned and guaranteed.

**M. J. HUNT'S SONS**

1600 N. Delaware Ave., Phila., Pa.

#### SLIP RING MOTORS

50 HP. 900, 3/60/220 Volt Fairbanks-Morse  
50 HP. 900, 3/60/220 Volt Western Electric  
100 HP. 720, 3/60/220 Volt Westinghouse CW

#### SYNCHRONOUS MOTORS

45 HP. 1200, 3/60/220 Volt General Electric  
60 HP. 1200, 3/60/440 Volt General Electric  
100 HP. 900, 3/60/220 Volt Westinghouse  
200 HP. 600, 3/60/440 Volt Electric Mach'y.

#### AC GENERATORS

30 WK. 1200, 3/60/240 Volt Westinghouse  
37 KW. 1200, 3/60/2300 Volt General Electric  
75 KVA 900, 3/60/220 Volt Westinghouse  
100 KW. 600, 3/60/440 Volt Western Electric

#### ARC WELDER

200 Amp. Gen. Elec. 3/60/220 motor driven  
General Electric type TA-125 form F-3

#### TURBINES

60 KW. 3/60/240 V. G.E.-Kerr non condensing  
100 KW. 3/60/480 V. Gen. Elec. non condensing

#### OIL ENGINE

50 HP. Fairbanks-Morse 4 cyl. heavy duty Marine  
AIR COMPRESSOR

14x12 Ingersoll-Rand class E. 317CFM. 60 lb.  
**Rockford Electric Equipment Co.**  
729 South Wyman St. Rockford, Illinois

#### MOTORS

3 PH. 60 Cy.	HP.	TYPE	SPEED
600 G.E. Sl. Rg.	720		
600 G.E. Sl. Rg.	252		
600 G.E. Synch.	257		
400 WEST. Sl. Rg.	505		
400 G.E. Sl. Rg.	885		
300 G.E. Sl. Rg.	575		
300 AL. CH. Sl. Rg.	585		
2-200 WEST. Sl. Rg.	900		
200 G.E. Sl. Rg.	900		
150 G.E. Sl. Rg.	870		
150 G.E. Sl. Rg.	1750		
100 G.E. Sl. Rg.	700		
100 AL. CH. Sl. Rg.	695		
100 WEST. Sl. Rg.	1160		
90 G.E. Sl. Rg.	720		
75 G.E. Sl. Rg.	1200		

Above are few of our stock items

**BELYEA CO., INC.** 155 W. 18TH ST. NEW YORK CITY

#### ENGINE GENER.

1—400 KVA. CR. WH. 240 V. 3 Ph., 60 Cy., 120 R.P.M. to Hamilton Corliss Engine.

#### MOTOR GENER.

1—1000 K.W. G.E. MPC 275 V. D.C. Gen. Conn. to 1440 H.P. G.E. ATI 4600/2300 V. 514 R.P.M. 3 Ph. 80 Cy.  
1—300 K.W. WEST. 600 V. D.C. Gen. Conn. to 433 H.P. Synch. motor 4600/2300 V. 3 Ph. 60 cy. 1200 R.P.M.

### Engine-Generator Set

500 K.W. General Electric, direct connected 28x28 Engine, AC. 3. 60 220/480 volt with complete equipment; still on foundation for inspection. Guaranteed equipment, bargain price. 8,000 ft. Redwood 6" and 8" Wood Pipe.

Many other bargains—mail your inquiries.

**HAGGARD MACHINERY CO.**  
239 Fourth Ave., Pittsburgh, Pa.

### ELECTRIC LOCOMOTIVES

4-5 Ton WESTINGHOUSE TROLLEY CONSTRUCTION TYPES, DUPLICATES, 250 V. 36" track gauge. Practically brand new. Guaranteed to be used less than ten months since being shipped from Westinghouse. Many other locomotives all weights, gauges and types. Send for List.

**Wallace E. Kirk Company, Inc.**  
Grant Building Pittsburgh, Pa.

Electric Locomotives, 4 ton to 13 ton any gauge.  
Alternator 200 K.W., 2300 volts.  
Motor—Generator and Rotary Converters, Motors, Transformers, Pumps, Hoists, Blowers, SPEED REDUCERS, Mine Cars, Mining Machines and Mining Equipment. Send for stock list.

**GUYAN MACHINERY COMPANY**  
LOGAN, WEST VA.

### GAS-OIL-ELECTRIC LOCOMOTIVES

TWO—23½ ton, standard gauge (4'3½"), air brakes, automatic couplers, electric headlights. Highly efficient, economical. Strictly firstclass condition; practically good as new.

**EQUITABLE EQUIPMENT CO. INC.**  
410 Camp St. New Orleans, La.

### BARGAINS IN GUARANTEED USED ARC WELDERS

All types and amperes on hand. Gas, electric, pulley drives . . . amperes from 75 to 600. Also complete generator units for building your own welder. Tremendous savings. Write for bargain list.

KEN'S Exchange Box MR-106 Troy, Ohio

### EXCELLENT USED EQUIPMENT

120 HP Fairbanks "VA" Full Diesel Engine  
350 HP Fairbanks "VA" 200 KW Diesel Gen. Set  
250 HP Busch Sulzer, 300 HP McIntosh Gen. Sets  
2 & 5 Drum Steam, Gasol., Elec., Diesel Hoists

#### Mississippi Valley Equipment Co.

505 Locust St., St. Louis, Mo.  
Cars, Locomotives, Crushers, Compressors, Generators, Derricks, Rail, Tanks, Steel Piling.

### WE BUY AND SELL

Power Plants, D.C. and A.C. Motors, Generators, Transformers, Pumps and Elec. Instruments. Give us the opportunity of bidding. NOTE: We carry a diversified stock, and your inquiries will receive immediate attention. Satisfaction guaranteed.

**Superior Electric Machinery Co.**  
253 North Third Street, Philadelphia, Pa.

### PENN ELECTRICAL ENGINEERING CO.

SCRANTON, PA.

### A.C.-D.C. MOTORS—1—500 H.P.

### TRANSFORMERS PUMPS

WIRE, WRITE, PHONE YOUR REQUIREMENTS.

### A. C. UNITS

KVA	Make	Location
750	G. E.—Ames Uniflow	N. Y.
375	C. W.—Ames Vertical Uniflow	Conn.
350	Wghse.—Hamilton Corliss	N. Y.
312	Al. Chal.—Erie Ball 4 v.	Mich.
312	C. W.—Ames Uniflow	Conn.
250	G. E. Turbine Unit (NEW)	N. Y.
150	Wghse.—Erie Ball 4 v.	Texas
125	G. E.—Turbine Unit	Mich.
120	G. E.—Ames Uniflow	Ga.
100	G. E.—Erie Ball 4 v.	Ga.

ENGINE (Belted): 17 x 18 Skinner Uniflow—Pa.  
ENGINE (Belted or Dir. Con.) 24 x 30 Erie Ball 4 V.—Conn.

ENGINE (Belted or Dir. Con.) 17 x 20 Skinner Uniflow—N. Y.

BOILER: 300 H.P. B.&W., 200 lbs. (NEW)—N.Y.

Direct Current: 200 KW G. E. 250 v. (3 wire)—E. B. 4 v.—N. Y.

**Power Plant Equipment Co., Inc.**

39 Cortlandt St., New York, N. Y.

### TRANSFORMERS

Sales and Repair Service on Rewinding and Rebuilt Distribution, Potential and Current Transformers. Write for our Transformer Rewinding Price Schedule: Satisfaction Guaranteed. NOTE: We are in the market to purchase at all times transformers of every description, burned out, odd voltages, all sizes and types. Send us a list of your offerings.

**Philadelphia Transformer Co. Inc.**  
253 North Third St. Phila., Pa.

### FOR SALE

### 3000 H.P. DIESEL ELECTRIC PLANT

4—750 HP Busch-Sulzer Engines direct connected to 500 KW G.E. Generator, 60 cy. 3 ph. 2300 V.

1—500 KW Westinghouse 60 cy. 550 V. Rotary Converter.

1—20 ton American 8 wheel Loco. Crane, 50-ft. boom.

**HYMAN-MICHAELS COMPANY**

20 No. Wacker Drive, Chicago  
Railway Exchange St. Louis 101 West 31st St. New York

## —TRANSFORMERS— SALES AND REPAIR SERVICE

3—200 KVA Gen. Electric Transformers, 60 cycle, 6900/11950Y—575 volts. **\$460.00 EACH**

We carry a complete stock. Write for Catalog No. 131-B

All transformers guaranteed for one year.

WANTED: Transformers, burned-out or in operating condition.

**THE ELECTRIC SERVICE COMPANY, Inc.**

"America's Used Transformer Clearing House"

Station M. Cincinnati, Ohio





## REBUILT METALWORKING MACHINERY

A.S.M.E. BOILERS—2-598 H.P. Edge Moor W. T. 240 lbs.  
2-200 H.P. Oil City, horizontal, 100 lbs.  
1-150 H.P. 72" x 18" H.R.T., 125 lbs.  
1-80 H.P. 60" x 16" H.R.T. 150 lbs.  
1-80 H.P. Vertical, 110 lbs.  
BORING MILLS—3 1/2" bar Giddings & Lewis horiz.  
24" Bullard, vertical, side head.  
DRILLS—6" Mueller plain radio, motor drive.  
6" Fosdick Universal radial, cone dr.  
3" Gang plain radial, cone drive.  
27" Superior upright drill, belt dr.  
21" Cin. Bick. upright, tap, attach. mtr. dr.  
LATHES—20"-40" x 10" Rahn Larmon Extension  
bed Gap Lathe Belt Dr.  
18" x 9" Sidney, belt dr. Q.C. taper attach.  
18" x 12" South Bend, belt drive, reg. equip.

24" x 10" Greaves Klusman, heavy, belt dr.  
30" x 30" Harrington, plain chg. belt dr.  
MILLERS—Osterlein Universal size 20"x7"x17",  
cone drive, dividing head and vise.  
No. 48 Becker Vert. table 10" x 26", belt;  
No. 3 Hendey Norton, universal, table 48" x 11",  
belt drive, div. hds. & vert. attach.  
PIPE MACHINES—1/2"-2" Portable std. makes.  
1/4"-2" Landis, motor drive.\*  
1 1/4"-4" Oster, belt drive.\*  
2 1/2"-8" Oster, motor drive.\*  
2 1/2" to 6" E.C.&B. with Landis Hd.  
motor dr.  
PUNCHES-SHEARS—24" Southwark, 3/4"x3/4" mtr.dr.  
No. 3 Roversford dbie. end, 1 1/4" x 1 1/4", mtr. dr.  
48" Long & Alistatter Punch, cap. 1 1/2" x 1, motor  
1/2" cap. McCabe Flanging machine, air optd.  
8" Niagara Squaring Shear—3/16 Cap. Belt Dr.

## THE O'BRIEN MACHINERY CO.

109 N. THIRD ST.

MAR 0727

PHILADELPHIA, PA.

## First Class Condition Priced for Quick Sale

- 6-X-71 Ingersoll-Rand Hammer Drills  
equipped for 1 1/2" drill rods; 3/4"  
blow tubes, including air operated  
plunger. Each drill also equipped  
with complete chucks and heads for  
using 1 1/4" drill rods.
- 2-Ingersoll-Rand Steam Driven Air  
Compressors, type FR1, steam  
cylinder 14" x 12", air cylinder 14"  
x 12".
- 1-Ingersoll-Rand Steam Driven Air  
Compressor, type FR1, steam  
cylinder 12" x 12", air cylinder 14"  
x 12".
- 3-9H Ingersoll-Rand Air Hoists.
- 2-EU Ingersoll-Rand Air Hoists.
- 1-Ingersoll-Rand Air Operated Jack  
Bit Grinder.
- 1-5 KW Westinghouse Turbine Gen-  
erator, 125 V., 40 Amp.
- 27-1 1/4" rd. X-71 Ingersoll-Rand Hollow  
Drill Bits ranging in length from  
22' to 26'.
- 12-1 1/2" rd. X-71 Ingersoll-Rand drill  
rods, 26 1/2' long.
- 55-pcs. 1 1/4" Octagon solid drill steel  
ranging in length from 20' to 32'.
- 1-115 ton Blaw-Knox Bin.
- 1-125 hp. Return Tubular Boiler, Na-  
tional Board 87.
- 1-100 hp. Locomotive Type Boiler,  
ASME code.

General Contracting Corporation  
Pittsburgh, Pa.

## BOILERS

- 150 H.P. Ames Empire, ASME  
125 lbs.
- 80 H.P. Erie Economic, ASME  
100 lbs, with stack.

## MACHINE TOOLS ELECTRIC MOTORS and GENERATORS AIR COMPRESSORS BOILERS-PUMPS

**DELTA EQUIPMENT  
COMPANY**  
148 N. 3d Street, Phila., Pa.

## NEW BELTING

### Cotton Woven Treated Belting

20,000 ft. NEW Belting in original  
roll, sizes 30" to 2 1/2" widths, 100 ft.  
to 500 ft. lengths. Medium and Heavy  
weights. Suitable for Conveyor or  
Transmission. For sale at 50% of its  
original manufacturing price. Send  
for itemized list of sizes, quantities  
and prices.

**MARINE METAL & SUPPLY CO.**  
167 South Street New York City

## FOR SALE

### ROAD MACHINERY:

- 1-10 Ton Holt Tractor
- 1-No. 12 Adams Leaning Wheel Road  
Machine
- 4-1 1/4 yd. Baker-Maney Quick Load-  
ing, all steel, scrapers

### LOGGING EQUIPMENT:

- 1-64 Ton Rogers Locomotive
- 1-70 Ton Shay Locomotive
- 1-Model "I" American Log Loader
- 1-Model "C" American Log Loader,  
pile driver and shovel attachment

### SAW MILL EQUIPMENT:

- Log Deck Machinery, complete
- 12" Shot Gun Feed & carriage track,  
90 lb. rail
- 2-Trains Live Rolls
- 2-Heavy Edgers
- 1-32 saw Wilkin-Challoner Steam  
Gang Slasher, Trimmer, etc.
- 1-Berlin No. 14 Sizer, for timbers up  
to 14 x 20.

Send for complete list.

**EAST ALABAMA LUMBER CO.,**  
TUSKEGEE, ALA.

## SPECIAL OFFERINGS

- 60 HP F-M type Y Vertical Oil Engine 257  
RPM, shaft extension, cold starting.
  - 15 HP GE 3 ph. 60 cy. 220 V 1200 RPM  
Slip Ring Motor, complete.
  - 9x8 I-R, type ER1 Air Compressor.
  - 40 HP Kewanee Smokeless type Boiler  
with Stoker.
- Many other bargains. Send us your in-  
quiry.

**Cincinnati Machinery & Supply Co.**  
25 W. Second St. Cincinnati, Ohio

## MACHINE TOOLS

Lathes all sizes, Drill Presses, Planers all  
sizes, Milling Machines, Shapers, Punches,  
Presses, Air Compressors, Motors all sizes,  
also woodworking machinery. 200 ma-  
chines in stock.

**EASTERN MACHINERY CO.**  
112 So. Calvert St. Baltimore, Md.  
Phone Cal. 0558

## WRECKING

We will purchase out-right or dis-  
mantle old and obsolete plants and  
buildings. Will also purchase ma-  
chinery and equipment of every de-  
scription. Advise us what you have.

**GEORGE STEINER**

1233 West Lake St., Chicago, Ill.

## STEEL TUBE BUILDINGS

There really is "something new under the  
sun."

Lighter and stronger buildings made of  
steel tubing. You save plenty—no cost  
to investigate. Write,

**W. M. SMITH & CO., Birmingham, Ala.**

## GOOD USED EQUIPMENT

### SPECIAL

1-10 1/2 x 10 1/2 Vertical Twin Cylinder  
VILTER REFRIGERATING MA-  
CHINE, direct connected to 100 H.P.  
Synchronous A.C. Motor, all acces-  
sories. Still set up as operated. Ca-  
pacity of unit 69.7 tons refrigeration.  
Excellent condition.

Unit can be seen at former plant of  
Carolina Rayon Mills, Burlington,  
N. C., we are at present liquidating.

Send for list of remaining items.

### 4-6'x40' Direct Heat ROTARY DRYERS.

- 1-Sturtevant 1-ton FERTILIZER MIXER  
with bagger.
- 1-Atlanta Utility 1-ton FERTILIZER  
MIXER.
- 1-Size 30 Atlanta Utility 2-cage MILL,  
ball bearings.
- 1-#3 CV Mitts & Merrill HOG.
- 1-SACKING SCALE, 200 lb. beam,  
Atlanta Utility Works.

Send for copy of "Consolidated News"  
listing complete stock of machinery  
for the Chemical and Allied Industries.

### Consolidated Products Co. Inc.

16-21 Park Row, New York, N. Y.

Warehouse and Shops:

331 Doremus Avenue, Newark, N. J.

## FIRE PUMPS Immediate Delivery

- 1000 GPM Worthington Motor Driven  
Underwriters Fire Pump, 100 H. P.  
G. E., A. C. Motor.
- 500 GPM Worthington Motor Driven  
Underwriters Fire Pump, 50 H. P.  
G. E., A. C. Motor.
- 500-750-1000-1500 GPM Steam Driven  
Underwriters Fire Pumps.

Attractive Prices. Condition Guaranteed.

**A. G. Schoonmaker Corporation**  
36-44 Hudson Street Jersey City, N. J.

## BOILERS FOR SALE

- 3-150 H.P. HRT—150 lbs. W. P.
  - 2-150 H.P. Heine—175 lbs. W. P.
  - 2-75 H.P. HRT—125 lbs. W. P.
- Pumps, heaters, air compressors & other  
Power Plant Equipment.

**BOILER ENGINEERING & SUPPLY CO.**  
Phoenixville, Pa. Telephone 2524

- \*2-500 hp. Stirling boilers, A.S.M.E. code, super  
heaters, Westinghouse stokers.
- 2-350 hp. Stirling boilers, 160 lb., new tubes,  
hand fired.
- 3-814 hp. Casey Hedges boilers, 215 lb. pressure,  
with chain grate stokers.
- 2-813 hp. Edgemoor boilers, 300 lb. pres., com-  
plete plant.
- 2-354 hp. Stirling boilers, 200 lb. pressure, with  
superheaters, complete plant.
- 2-598 hp. Edgemoor boilers, 240 lbs. pressure,  
ASME code.
- 1-160 kw, 3-60—2300 volts, Harrisburg-Fleming  
Corliss engine generator set.
- 1-167 kw, 3-60—2300 volts, Ames Uniflow engine.
- 2-150 hp. Casey Hedges HRT boilers, 150 lb.  
pressure A.S.M.E. code.
- 2-4000 kw. General Electric Cond. Turbines, comp.
- 1-180 & 1-300 KW Chase uniflow eng. gen. sets.

\*The above is only a partial list.

List Your equipment with us.

**FLETCHER SALES COMPANY**  
835-130 E. Washington Bldg., Indianapolis, Ind.



## First Class Condition Priced for Quick Sale

- 1—Link-Belt K-55 diesel dragline, powered with 125 hp. Imperial Atlas Engine, 75' boom, Kohler electric light plant, two 1½ yd. dragline buckets, and 5 shovel mats. Price upon application.
- 1—"60" Caterpillar Tractor, equipped with LaPlant-Choate hydraulic bulldozer, also hydraulic control valve and 2½ cu. yd. Crescent hydraulic scraper bucket. Price upon application.

**General Contracting Corporation**  
Pittsburgh, Pa.

300 HP Heine ASME W. T. Boiler.  
100 HP Lambert 3 Drum Elec. Hoist.  
2040 ft. Ing. Rand Elec. Air Compressor.  
603 ft. I. R. Diesel Air Compressor.  
676 ft. I. R. Model XCB Air Compressor.  
4—750 HP Busch Sulzer Diesel Units.  
15 Ton 70 ft. Boom, Stiff Legged Derrick.  
2—385 ft. Chicago Pneu. NSB Air Compressors.  
1250 KW Hamilton A. C. Uniflow Unit.  
150-200-300-400 ton Car Wheel Presses.  
Champion Model 1030 and 1040 Jaw Crushers.  
5—12 and 14 Ton Plymouth 36 Ga. Locomotives.  
1½ Yd., 2 Yd., 3 Yd., 5 Yd., Dump Cars.  
90 HP, 120 HP, 140 HP and 360 HP Diesel Eng.  
150 ton, 50 ft. R. R. Track Scale.  
520 HP B&W 250 lbs. W. T. Boiler.  
125 KW Skinner Uniflow 3p., 60c., 2300 v.  
175 KW Corliss Unit 3p., 60c., 2300 v.  
Models 25 and 49 Kennedy Reduction Crushers.  
25 Ton Browning Locomotive Crane.  
24x26 Link Belt Coal Crusher.  
9x16, 10x20 and 24x36 Jaw Crushers.  
12 ton Milwaukee Std. Ga. Gas Locomotive.  
**COMPLETE PLANTS BOUGHT & SOLD**  
**R. C. STANHOPE, INC.**  
875-A Sixth Ave., New York, N. Y.

## FOR SALE

### CARS

- 86—12 yd. Western Air or Hand  
Dump Cars  
12—41 ft. 50 ton Steel Flat Cars  
16—40 ft. 50 ton Steel Gondolas  
60—36 ft. 40 ton Wood Gondolas  
80—50 ton Steel Hopper Coal Cars

### EQUIPMENT

Locomotives, Cranes, Steel Sheet Piling, Refrigerator Cars, Tank Cars.

### RAILS

New and Relay Rail, all weights, C/L or tonnage Lots.

**HYMAN-MICHAELS CO.**

20 N. Wacker Dr. Bldg.  
Chicago

Railway Ex. Bldg. 101 West 31st St.  
St. Louis, Mo. New York.

## SAUERMAN SLACKLINE CABLEWAY ELEVATOR FOR SALE

One ¾ yd. Sauerman Slackline Cableway Elevator with 8½ x 10" American Hoist, D.D. & D.C. including 35 H.P. Locomotive type boiler with all cables, sheaves, guys. Rig all complete except the mast.  
**S. P. Cronheim, 65 Forsyth St., N. W.**  
Atlanta, Ga.

## ROLLER FOR SALE

Roller—10 Ton Gallon Master 3 Wheel equipped with 4 cyl. Climax Gasoline Engine with Pneumatic Scarifier. In absolute first class condition throughout.

**EDELEN & BOYER CO.**

236 N. 23rd Street Philadelphia, Pa.

## FOR SALE

- 2—450 Marion Diesel Electric Shovels
- 3—132 Erie 1 yd. Steam Shovels.
- 2—30 Ton 100' Boom Steel Stiffleg Derricks.
- 2—100 H.P.—3 Drum Electric Hoists.
- 1—25 Ton American Loco. Crane.
- 1—100 H.P. Locomotive Type Boiler.
- 1—No. 7 McKiernan-Terry Pile Hammer—1-9B2 and 1-11B-2 Hammering Leads—30'—60' for No. 7 and 9B2 Hammers.
- 1—300' Sullivan 2 stage Compressor.
- 1—870 Cu. Ft. Ingersoll Rand Compressor.
- 1—2033 ft. C.P. Synchronous Motor Driven Compressor.
- 2—354 cu. ft. P.O.V.-2 Direct Diesel Driven Compressors.
- 1—120 H.P.—Atlas 6 cyl. 600 rpm. Diesel Engine.
- 1—360 H.P.—Fairbanks 6 cyl. 257 rpm. Diesel Engine.
- 1—50 Diesel Caterpillar Tractor with Bulldozer.
- 3—60 Gas Caterpillar Tractors with Bulldozers.
- 3—36" Gauge 12-ton Gas Locomotives.
- 1—Standard Gauge 10-ton Gas Locomotive.

**Coast-to-Coast Equipment Corp.,**  
101 W. 31st Street. New York, N. Y.

## Modern AIR COMPRESSORS

ALL TYPES AND SIZES

Correctly Rebuilt

Guaranteed

**EARL E. KNOX COMPANY**

12 WEST 2ND ST.

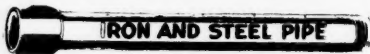
ERIE, PA.

## STEEL SHEET PILING

--ALL SECTIONS IN STOCK--  
--DOMESTIC AND IMPORTED--

**Coast-to-Coast Steel Co.**

101 WEST 31st ST., NEW YORK



Large quantity new and used Government material in excellent condition, ready for immediate shipment. Low prices.

**CENTRAL PIPE & SUPPLY CO.**  
Box 1099 Charleston, W. V.

NEW AND USED

## PIPE

NEW THREADS AND COUPLINGS  
**GREENPOINT IRON & PIPE CO. Inc.**

187-207 Maspeth Ave., Brooklyn, N. Y.

## ALBERT & DAVIDSON PIPE CORP.

**NEW-USED-UNTESTED**  
2nd Ave. 50th-51st St. EST. 1904 Brooklyn, N.Y.

## PIPE

Reconditioned pipe, new threads and couplings, all sizes, ¾ in. to 36 in., guaranteed suitable for all practical purposes.

**MARINE METAL & SUPPLY CO.**

167 South Street, New York City

**NEW-USED RECLAIMED FROM ¾" TO 72"**  
Cut to length and stock

**ALBERT PIPE SUPPLY CO. Inc.**  
Berry and North 15th St. Brooklyn, N.Y.

## COMPLETE Sawmill Plant

including 3—150 H.P. Boilers, Corliss Engine, Clark 4 Block Carriage, Edger, Slasher, Filer Stowell 4 Saw Bolter, 9 Rim Saw High Speed Lathe Machine, etc., 4 Gasoline Locomotives, 40 Logging Cars, 20 miles of Rail—

**Write Box 84,**  
Norfolk, Va.

## DUMP WAGONS

Brand New Priced Cheap

- 9—all steel 2-door bottom dump wagons mfd. by LaPlant Choate Co., mounted on 4 steel disc roller bearing wheels; 5—cap. 6-yd. 4—cap. 3-yd.
- 9—sets (18) caterpillar assemblies; 10-ton capacity, caterpillar width 15 in. Overall length 6 ft. Height 2'10".
- 8—Wooden body dump wagons, mfd. by Little Red Wagon Co. cap. 2-yd.
- 2—Martin 8-wheel log wagons, complete with bolsters, cap. 10 to 15 tons.

Send for complete stock list.

**Equipment Corp. of America**  
CHICAGO

1166 S. Washtenaw Ave. Phone Nevada 2400

PHILADELPHIA PITTSBURGH  
P.O. Box 5419 Kingsessing P.O. Box 933  
Sta. Phone Granite 7600 Phone Federal 2000.

## USED MACHINERY FOR SALE

- 2—No. 5 Roots Blowers, 2 Osborne Jolt Squeezers, 1—7 to 6 Sullivan Air Compressor, 1—No. 6 Sly Cinder Mill.
- 1—30' x 20' Leblond Lathe, 1—21x24x8' Cincinnati Planer with motor, 1—20' Steptoe Shaper, and miscellaneous drills.
- 1—Set patterns, aluminum matchplated, for 18" coal and wood range.

**The Southern Pipe & Foundry Co., Inc.**  
Knoxville, Tennessee

## FOR RENT— WILMINGTON, N.C. Manufacturing locations

Two buildings, one two story, brick-veneer, with electric elevator, located on Cape Fear River served by Inland Waterway steamship lines with low freight rates, City fire and police protection, also fronts on A. C. L. siding with daily freight service. Auto truck loading facilities, area 8250 sq. ft. Other building, solid brick, two story, with electric and hand elevators, fronts on A. C. L. tracks directly across street from first building. Auto truck entrance, book vault. Area 10,590 sq. ft.

**Lenox G. Cooper**

Wilmington, N. C.

## NEW AND USED

**Pipe and Fittings, I Beams, Channels,  
Boiler Tubes, Angles, Bars,  
Valves Sheets**

**MARYLAND PIPE & STEEL CORPORATION**

OSTEND & SCOTT STS., BALTIMORE, MD.

# Northern Hard Rock Maple Flooring

BLOCK

Holt Hardwood Co., Oconto, Wis.

STRIP

MEMBERS OF MAPLE FLOORING MANUFACTURERS ASSOCIATION

## GALVANIZING

(NOT DIPPED PROCESS)

The largest job galvanizing plant in the United States

GALVANIZED PRODUCTS FURNISHED

Joseph P. Cattie & Bros., Philadelphia, Pa.

## EARLE

Cut Spur, Bevel, Herringbone, and Worm Gears

All sizes. Every description. Operating Machinery for Bridges, etc. "Lee Simpler" Cold Metal Saws.

The Earle Gear & Machine Co.

4719 Stenton Ave.,  
Philadelphia, Pa.

110 State St., Boston, Mass.  
149 Broadway, New York City

## GEARS

## Classified Opportunities

### Clocks

#### KLOCKS FOR ALL PURPOSES

Approved Watchman's Clocks  
and Time Recorders  
Supplies for all makes.

L. E. Kaiser & Sons, Inc.  
221 N. Liberty St., Baltimore, Md.  
24 HOUR SERVICE ON REPAIRS

### Patent Attorneys

PAUL B. EATON, Patent Attorney,  
1408-R Johnston Bldg., Charlotte, N. C.,  
614 Munsey Building, Washington, D. C.,  
417 Wachovia Bldg., Winston-Salem, N. C.

### Inventions for Sale

MANUFACTURERS—Write for our FREE  
Classification Sheet of Inventions for Sale,  
covering 135 main subjects, and in one or  
more of which you will doubtless be in-  
terested. ADAM FISHER CO., 578 Enright,  
St. Louis, Mo.

### Business Opportunities

\$6,000,000 annually leaves the South for  
lemons transported half way around the  
world. A good, thin skin, juicy, commer-  
cial size lemon, adapted to Florida grow-  
ing conditions, has been developed and  
proved—a problem that took 20 years to  
solve. Advise the amount you could invest  
and we will submit a sound proposition  
offering unusual opportunities.  
DESOTO NURSERIES, DeSoto City, Fla.

Official of large contracting company hav-  
ing sold interest desires connection financial  
and active. Contracting or allied business  
preferred. Address No. 9347, c/o Mfrs.  
Record.

IMMENSE CLAY DEPOSIT ON TIDE  
WATER close to Gulf of Mexico. Will  
make over fifty million dollars worth of  
brick and pottery wholesale. Products  
loaded at mine on cars or boats. Artesian  
water and oil. Value many times price.  
Owner 80 years old and alone. Special in-  
ducement to quick buyer. Must make ap-  
pointment before coming.

L. F. CULVER, Gautier, Miss.

### Hardwood Flooring Plant

BARGAIN—Complete hardwood flooring  
manufacturing plant. Abundance of ma-  
terials available.

R. P. Johnson, Wytheville, Va.

### Pecan Grove

Bargains: 400 acre bearing Pecan Grove,  
South Georgia. Also 200 acre apple orchard  
and modern 50 room Mountain Resort Hotel,  
Georgia.

Muller, Box 32, Welaka, Fla.

### Men Wanted

#### SALARIED POSITIONS

\$2,500 to \$25,000

This thoroughly organized advertising ser-  
vice, of 26 years' recognized standing and  
reputation carries on preliminary nego-  
tiations for positions of the caliber indi-  
cated, through a procedure individualized to  
each client's personal requirements. Several  
weeks are required to negotiate and each  
individual must finance the moderate cost of  
his own campaign. Retaining fee protected by a  
refund provision as stipulated in our agree-  
ment. Identity is covered and, if employed,  
present position protected. If you have actu-  
ally earned over \$2,500, send only name and  
address for details. R. W. Bixby, Inc., 103  
Delward Bldg., Buffalo, N. Y.

#### EXECUTIVE POSITIONS

Your future progress is largely depen-  
dent upon the position you occupy in the  
industrial world. This organization has  
demonstrated its ability to locate desirable  
salaried connections for men of ability.  
If you are receptive toward new and im-  
proved connections, it will be decidedly to  
your advantage to investigate the possi-  
bilities of this service. Your Correspondence  
is solicited.

EXECUTIVE PLACEMENT ASSOCIATES  
415 LaFayette Building, Buffalo, N. Y.

EXECUTIVES—If you can qualify for  
positions earning \$3600 or more, our personal  
and confidential service quickly locates  
suitable openings. National Executives As-  
sociation, 437 Vendome Bldg., Nashville, Tenn.

#### SALES ENGINEER WANTED

WANTED—Sales Engineer for the market-  
ing of Reinforcing Steel, Steel Sash, Bar  
Joists, and Allied Products. Excellent op-  
portunity in Southeast. Give complete per-  
sonal history and experience. Address No.  
9344 c/o Mfrs. Record.

### Apartment For Rent

Apartment in high class suburban district  
of Baltimore. Two rooms and bath. Porches,  
Garage, Telephone. Meals furnished if de-  
sired. References required. Address HOUSE  
c/o Mfrs. Record.

### Machinery and Supplies

BARGAINS—Demonstrator Arc Welders.  
Gasoline and electric drive, 30 days' trial.  
Easy terms if desired. Write Ken's Ex-  
change, Box MR-1061, Troy, Ohio.

### Minerals

Non Metallic Minerals FOR SALE

Also Sulphur, Tungsten, Asbestos deposits  
on Royalty Basis. Virgin Timber, Coal,  
Iron Ore.  
Pritchard, Commerce Bldg., Amarillo, Texas.

### FOR SALE Retail lumber and building material yard

consisting of ten acres with lumber sheds for one  
and half million feet, moulding warehouse, millwork  
building, and two building material warehouses. Fire  
protection, and railroad siding. Suitable as concentra-  
tion yard. For full particulars write

Cowan Lumber Co., Mobile, Ala.

Statement of the ownership, management,  
circulation, etc., required by the Act of  
Congress of August 24, 1912, of MANUFACTURERS  
RECORD, published monthly at Bal-  
timore, Md., for October 1, 1936.

State of Maryland,

City of Baltimore,

Before me, a Notary Public, in and for  
the State and City aforesaid, personally ap-  
peared R. Lisle Gould, who, having been  
duly sworn according to law, deposes and  
says that he is the Treasurer of the MANU-  
FACTURERS RECORD, and that the following  
is, to the best of his knowledge and belief,  
a true statement of the ownership, manage-  
ment, etc., of the aforesaid publication for  
the date shown in the above caption, re-  
quired by the Act of August 24, 1912, em-  
bodied in Section 411, Postal Laws and  
Regulations, to wit:

1. That the names and addresses of the  
publisher, editor, managing editor and busi-  
ness managers are: Publisher, Manufactur-  
ers Record Publishing Co., Baltimore, Md.;  
editor, Frank Gould, MANUFACTURERS  
RECORD, Baltimore, Md.; managing editor,  
Howard L. Clark, MANUFACTURERS RECORD,  
Baltimore, Md.; business manager, Frank  
Gould, MANUFACTURERS RECORD, Baltimore,  
Md.

2. That the owner is Manufacturers  
Record Publishing Company, Baltimore, Md.;  
Stockholders are: Frank Gould, MANUFAC-  
TURERS RECORD, Baltimore, Md.; C. R. Mar-  
chant, MANUFACTURERS RECORD, Baltimore;  
Md.; Wm. M. Beury, MANUFACTURERS  
RECORD, Baltimore, Md.; R. Lisle Gould,  
MANUFACTURERS RECORD, Baltimore, Md.;  
Fleet-McGinley, Inc., Baltimore, Md.

3. That the known bondholders, mort-  
gagees and other security holders owning  
or holding 1% or more of total amount of  
bonds, mortgages or other securities are:  
Baltimore Commercial Bank; estate of  
Richard H. Edmonds.

4. That the two paragraphs next above,  
giving the names of the owners, stock-  
holders and security-holders, if any, con-  
tain not only the list of stockholders and  
security-holders as they appear upon the  
books of the company, but also, in cases  
where the stockholder or security-holder  
appears upon the books of the company as  
trustee or in any other fiduciary relation,  
the name of the person or corporation for  
whom such trustee is acting is given; also  
that the said two paragraphs contain state-  
ments embracing affiant's full knowledge  
and belief as to the circumstances and  
conditions under which stockholders and  
security-holders who do not appear upon  
the books of the company as trustees hold  
stock and securities in a capacity other  
than that of a bona-fide owner, and this  
affiant has no reason to believe that any  
other person, association or corporation has  
any interest, direct or indirect, in the said  
stock, bonds or other securities than as so  
stated by him.

R. LISLE GOULD,  
Treasurer.

Sworn to and subscribed before me this  
28th day of September, 1936.

HARRY W. KLUTH.

(My commission expires May 3, 1937.)

# INDEX FOR BUYERS

Numbers Indicate Pages Where Products Can Be Found

Adding Machines	23	Hotels	79
Aluminum	4	Knives (Planing)	77
Architects	87	Lumber (Crescoted)	67, 71, 88
Banks	57	Machinery (New & 2nd Hand)	82, 83, 84
Belting	22	Machinists	76
Belting (Chain)	77	Marble	80
Blinds (Venetian)	67	Oil (Lubricating)	7, 8
Boxes (Paper)	78	Paper	78
Brick Machinery	77	Paper Making Machinery	11
Bridges	21, 49, 71, 72, 73	Partitions (Rolling Wood)	67
Buckets	73	Perforated Metal	77
Buildings (Steel)	71	Piling, Poles, etc.	67, 71, 88
Canning Machinery	77	Pipe (Cast Iron)	12, 73
Castings	76	Pipe (Clay)	73
Cement	24	Pipe (Steel and Iron)	15, 19, 84
Chemists	87	Pipe Machinery (Concrete)	73
Classified Opportunities	85	Pneumatic Tools	65
Clocks	74, 85	Professional Directory	87
Coal	57	Pumps	74, 77, 90
Compressors (Air)	6, 75	Railroads	91
Contractors	61, 87	Real Estate	56, 64
Conveyor-Belts	22, 77	Refrigerating Machinery	90
Crushers	77	Road and Street Material	53, 61, 73
Drawing Instruments	57	Road Machinery	2
Dredging Contractors	61	Roofing	55, 65, 70
Drills (Diamond & Shot)	87	Rope (Wire)	92
Electric light and Power	59	Sand and Gravel	61, 73
Electric Machinery	82	Screens	77
Engineers	61, 87	Screws and Nuts	75
Engines (Diesel, Gas & Gasoline)	3, 76, 89	Sheets (Steel Galv., etc.)	16, 69, 71
Expositions	58	Shovels (Power)	13, 45
Fencing	63, 65	Sites (Industrial)	56, 64
Filters (Water)	72	Stains (Wood)	70
Flexible Shaft	76	Stationers	79
Floor Resurfacers	63	Steel Plate Work	15, 69
Flooring	51, 67, 71, 73, 80	Steel Products	14, 16, 17, 20, 71
Galvanizing	80	Stone (Crushed)	73
Gas	57	Structural Steel	21, 49, 71, 72, 73
Gears	80	Tanks and Towers	69, 72
Glass (Window)	26	Tarpaulins	73
Granite	57, 80	Telephone Service	9
Grinding Wheels	10, 89	Tractors	2
Heating Apparatus	47	Trucks (Motor)	18
Hoists	75	Turbines & Water Wheels	77

## Welding Conference Spurs Interest

Recent welding conferences held by many Westinghouse distributors to keep operators informed regarding latest welding developments are believed to make for better welding and stimulation of the industry. Typical of these meetings was one held by Mo-Ark Oxygen Company and the Westinghouse Electric & Manufacturing Company in El Dorado, Ark., at which manufacturers experts demonstrated the latest type of gasoline driven D-C welding generators, new types of electric welding rod, welding of cast iron with acetylene, and new types of welding tools.

## Uses "Black" Light in Safety Education

It is believed that the exhibit of American Mutual Life Insurance Co., Boston, Mass., at the National Safety Congress in Atlantic City was the first to employ "black" light to display accident cause and effect in safety education. A series of safety posters, each illuminated alternated with white and invisible light, changes taking place instantaneously and without visible reason, not only attract attention but make the "lessons" impressive. The engineering department of the company, assisted by Hall Laboratories for Lighting Research, designed and built special mechanism which permits automatic control of the time and frequency of showing each poster and of advancing the series.

## Adopts "USS CARILLOY" as New Trade Name

Adoption of the new trade name "USS CARILLOY," to identify alloy steels produced by Carnegie-Illinois Steel Corporation, Pittsburgh, Pa., subsidiary of United States Steel Corporation, has been made. The new name does not signify a new product, nor does it apply to any single alloy steel, but is simply a new trade designation which will serve as a quality trademark for the entire group of well-known alloy steels previously marketed as "Carnegie-Illinois Alloy Steels."

## Store Front Modernization

The Pittsburgh Plate Glass Company has built and sent on tour a model store front exhibition. The project is intended to bring to architects, merchants and property owners of the United States the possibilities of store front modernization as a means to increased prosperity.

## Full Functioning Cranes

Lima Cranes, ranging from 10 to 50 tons, made by the Lima Locomotive Works, Incorporated, Lima, Ohio, are completely full-functioning. They have independent control or operation of all movements; have large drums and sheaves, are properly balanced, possess accessibility with all parts of the machinery in view of the operator from his position in the cab, and all controls within reach without leaving his seat. Vacuum controls may be applied to the clutches and brakes of erecting cranes. All Lima cranes are equipped with anti-friction bearings at every vital bearing point, helical cut gears throughout the main machinery, square lever shafts, and other features for efficient operation.

## Garage Compressors and Pumps

An improved line of compressor units for garages, repair shops, and service stations is announced by Worthington Pump and Machinery Corporation, Harrison, N. J. Single stage units are available with vertical compressors and the two-stage units with angle two-stage compressors. Motor sizes of the former range from one-quarter to five horsepower and of the latter from three-quarter to two horsepower. Type VS is described and illustrated in Bulletin W-621-B7C, and Type VA-2, in Bulletin W-620-B7E.

This company also announces a small, high-quality, low-cost centrifugal pump, of simple design and compact construction. Pumps of this type are furnished with direct motor drives or with pulleys for belt drive, motor sizes ranging from one-third to three horsepower, delivering from 10 to 130 gallons per minute with heads from 10 to 100 feet. They are described in Bulletin W-310-B5.

## Cotton Sterilization Plant FOR SALE

Bargain price at Norfolk, Virginia, one sterilization plant, complete with Oil-O-Matic Boiler. Slightly damaged by water. Capacity 40 bales of uncompressed cotton size. Can be seen at Army Base, Norfolk Tidewater Terminals.

Carolina Bagging Co., Henderson, N. C.



# DIRECTORY

ARCHITECTS  
CHEMISTS  
ACCOUNTANTS

ENGINEERS  
GEOLOGISTS  
CHEMICAL ENGINEERS  
CONTRACTORS  
PATENT ATTORNEYS

## ROBERT AND COMPANY, INC.

### MUNICIPAL ENGINEERING

Water Supply — Sewage Disposal — Street Improvements

ATLANTA, GEORGIA

#### Ven-ite Company, Incorporated

Heavy Duty Cement Floors

250 SOUTH BROAD ST.

PHILADELPHIA, PA.

#### Batson-Cook Company

Incorporated

General Contractors

WEST POINT, GA.

#### Algernon Blair

Contractor

MONTGOMERY, ALA.

#### Fiske-Carter Construction Co.

General Contractors

GREENVILLE, S. C.  
SPARTANBURG, S. C.

#### Poole Maynard, Ph.D.

Geological and Industrial Engineering

Established 1912

26 CAIN ST., N.W. ATLANTA, GA.

#### Whitman, Requardt & Smith

Engineers

Water Supply, Sewerage and Structural  
Engineering, Reports, Designs,  
Valuations.

Biddle and Charles Sts.  
BALTIMORE, MD.

#### Wiedeman and Singleton, Inc.

(Successors to Paul H. Norcross)

Consulting Engineers

WATER WORKS, SEWERS, SEWAGE  
DISPOSAL, APPRAISALS, VALUA-  
TIONS, REPORTS

Candler Bldg. ATLANTA, GA.

#### Walker Electrical Company

Electrical Contractors

General Offices: ATLANTA, GA.

Sales Offices:

ATLANTA, GA. COLUMBUS, GA.  
GREENSBORO, N. C.

#### McCallum Inspection Company

Inspection Engineers

Specialists in Wood Preservation

111 West Berkeley Avenue,  
NORFOLK, VIRGINIA

#### HARDAWAY CONTRACTING COMPANY

Engineers Contractors

Water Power Developments, Bridges  
COLUMBUS, GEORGIA

## SLAUGHTER, SAVILLE & BLACKBURN, INC.

ENGINEERS

Designs — Management — Reports — Appraisals  
Power Studies

Specialists In Southern Industrial,  
Chemical & Textile Plants, And  
Public Utilities

Unusual Experience In Locating Southern  
Industries

804 ELECTRIC BLDG.

RICHMOND, VA.

Established 1881

## FROEHLING AND ROBERTSON, INC.

Inspection Engineers and Chemists

Inspection of Cement, Steel, Pipe, Timber, Brick, Tile  
Design and Control of Asphalt and Concrete Mixture  
Water Analysis a Specialty.

RICHMOND

NEW YORK CITY

## WILEY & WILSON

Consulting Engineers

STEAM AND ELECTRIC POWER PLANTS

CENTRAL PLANT HEATING SYSTEMS

Heating and Ventilating Equipments for Public and Private Buildings

WATER SUPPLY, SEWERAGE AND SEWAGE DISPOSAL

MAIN OFFICE: LYNCHBURG, VA. BRANCH OFFICE: RICHMOND, VA.

## SALMONS DREDGING CO.

MARINE CONTRACTORS

Contractors to corporate interests on the East coast of United States  
and in South America

Dredging, Docks, Bridges, Salvaging and Pipe Line Construction

SHIPYARD CREEK

CHARLESTON, SOUTH CAROLINA

## HOOSIER ENGINEERING COMPANY

Erectors of Transmission Lines

46 SOUTH FIFTH ST., COLUMBUS, OHIO

CANADIAN HOOSIER  
ENGINEERING COMPANY LIMITED  
MONTREAL, CANADA

136 LIBERTY ST.  
NEW YORK

## SPRAGUE and HENWOOD, INC.

CONTRACTORS FOR

Diamond Core Drilling and Wash Borings

For Buildings, Bridges, Dams and all kinds of Minerals

"ANYWHERE"

also  
Manufacturers of Diamond Drills and Shot Drills

MAIN OFFICE SCRANTON, PA., U. S. A.

## Southern Drilling Company

Diamond Core Drill Contractors

Foundation Testing for Buildings, Bridges and Dams  
Exploration and development of coal and mineral properties.

NORTH HOLSTON, VIRGINIA.

## SYDNOR PUMP & WELL CO. INC.

ESTABLISHED 1889

We Specialize in Water Supply and in Pumping Equipment

1310 E. MAIN ST., RICHMOND, VA.



WE LOOK INTO THE EARTH  
By use of Diamond Core Drills

We test foundations for buildings, bridges and  
dams. We prospect coal and mineral lands in any  
part of North and South America.

PENNSYLVANIA DRILLING CO.

1201-1215 Chartiers Avenue  
Pittsburgh (Elliott), Pa.

DRILLING CONTRACTORS

## THE GEORGIA MARBLE COMPANY

Producers and Manufacturers of

GEORGIA MARBLE

TATE, GEORGIA

Atlanta · Chicago · Cleveland · Dallas · New York

M

OUNT AIRY GRANITE

Peerless Beauty and Strength

THE NORTH CAROLINA GRANITE CORP'N.

Mount Airy, N. C.

## FREDERICK SNARE CORPORATION

Harbor Works

Bridges

Railroads

Railroad Terminals

Warehouses

CONTRACTING ENGINEERS

Difficult and unusual foundation and engineering problems a specialty

114 Liberty Street, New York

Philadelphia, Pa.; Havana, Cuba; Lima, Peru; Cartagena, Colombia

Industrial Plants

Sugar Mills

Power Plants, Dams,

Reservoirs, Pipe Lines,

Tanks.

[illegible]

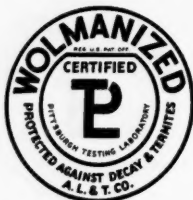
**Reg. U. S. Pat. Off.**

## PRESSURE-TREATED FOR PERMANENCE

## Certified Protection Against Decay and Termites

AMERICAN LUMBER & TREATING CO.

**37 W. Van Buren St., CHICAGO**



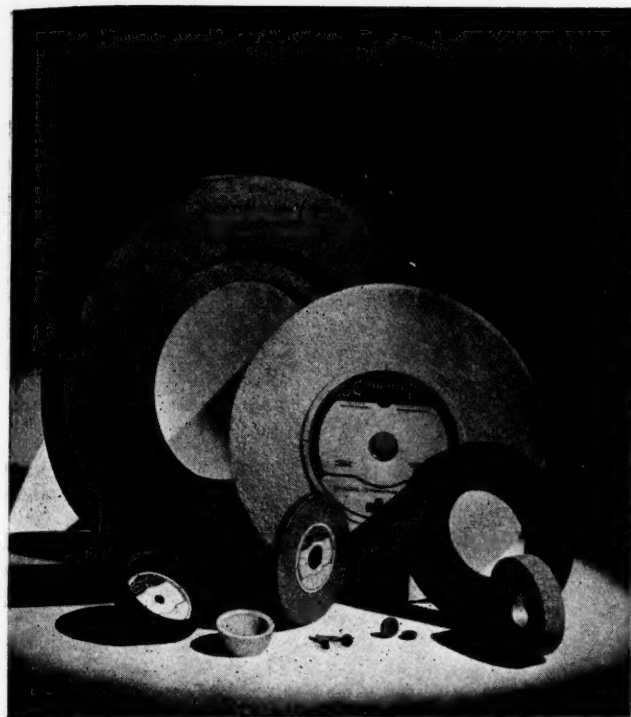
**Branch Offices:** Boston Franklin, Va. Jacksonville, Fla. Los Angeles New York St. Louis San Francisco Shreveport, La.

**PRESSURE TREATING PLANT SERVICE AVAILABLE FROM:**

Carbondale, Ill., Charleston, S. C., Crossett, Ark., Fordyce, Ark., Franklin, Va., Franklin Park, Ill., Green Springs, W. Va., Houston, Tex., New Orleans, La., Savannah, Ga., Shreveport, La., Texarkana, Tex., Wilmington, Cal., Wauna, Ore., Gainesville, Fla., Westboro, Mass.

# For All Your Grinding Jobs . . .

## NORTON WHEELS to Cut Costs



**F**OR over fifty years Norton Abrasive research has carried on, Norton scientists solving vital problems of workers in iron, steel and other metals. They have created GRINDING WHEELS for thousands of operations, for use in a million ways.

The Norton line of wheels runs from tiny mounted points  $\frac{3}{32}$ " x  $\frac{1}{8}$ " to gigantic pulpstones six feet in diameter, 54" wide and weighing ten tons. There are many types of special wheels for special jobs—crankshaft grinding, roll grinding, surface grinding, tool grinding, saw and knife grinding, internal grinding, marble coping and countless other operations.

If you have a grinding problem you can be sure that there is a Norton Wheel to solve it. Norton service includes highly-trained, practical men in the field and the laboratory—men who will see that you get the right wheels for your jobs.

W-536

**NORTON COMPANY, WORCESTER, MASS.**  
 New York Chicago Detroit Philadelphia Pittsburgh  
 Hartford Cleveland Hamilton, Ont. London Paris  
 Wesseling, Germany Corsico, Italy  
 BEHR-MANNING DIVISION, TROY, N. Y.  
 Norton and Behr-Manning Dealers in All Principal Cities

**NORTON ABRASIVES**

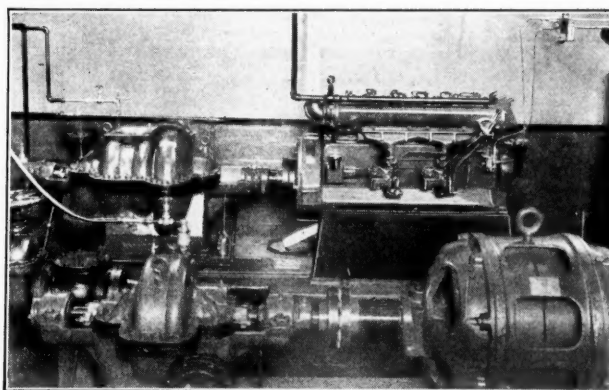
## SAFEGUARDING PUBLIC INSTITUTIONS HOSPITALS, CITY WATER SUPPLY PROVIDING POWER FOR ANY EMERGENCY

**Sterling  
 High  
 Duty**



**Internal  
 Combustion  
 Engines**

**Gas—Gasoline—  
 Diesel Oil Engines.**



*At the Wassaic State School, Wassaic, N. Y., a Sterling Petrel 6 cylinder 125 H.P. engine, direct connected to an American Well Works 5" 3 stage pump of 500 G.P.M. against a total head of 400' when running at 1350 R.P.M.*

*Consultation gratis, correct information on installations capably furnished.*

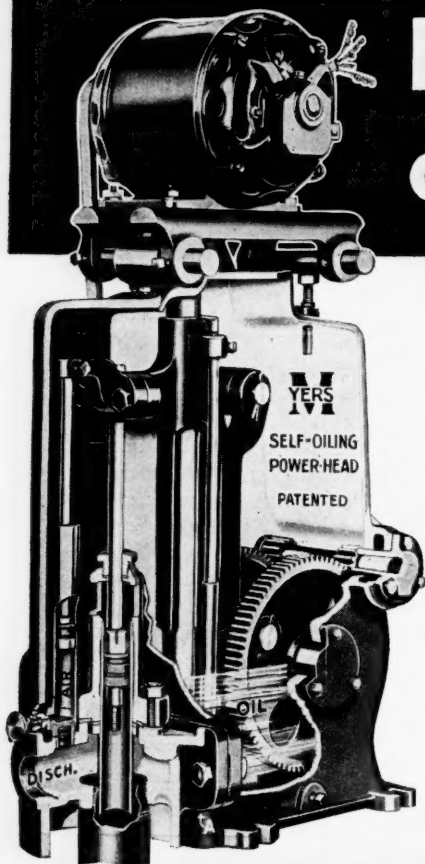
## STERLING ENGINE COMPANY

**Home Office and Plant**  
 1270 Niagara Street  
 Buffalo, New York

**Dept. C-7**  
*See Our Exhibit at the*  
*Twelfth National Exposition of Power & Mechanical Engineering*  
*Grand Central Palace, New York, Nov. 30 to Dec. 5, 1936*

**Branch Office**  
 900 Chrysler Bldg.  
 New York, N. Y.





# Built for MORE YEARS of BETTER SERVICE

If you have an eye for and are critical about performance values you will quickly discover upon inspecting any Myers Self-Oiling Power Pump that it is expertly designed, compactly built for durability and machined to precision standards for wear-free—care-free—operation.

It's both wise and practical to install Myers Self-Oiling Power Pumps. First, because there is a style and size for any installation up to ten thousand gallons of water per hour. Second, because they give such excellent satisfaction. Third, because prices are still so favorable.

Weather conditions have been extreme. Water shortage has been acute in many localities. Everywhere the demand for Myers Self-Oiling Power Pumps has been extremely heavy. If you have water problems to solve, write or wire us now for catalog and information.

**THE F.E. MYERS & BRO. CO.**  
ASHLAND, OHIO.

"When you think of WATER think of MYERS Pumps and Water Systems!"

**PUMPS—WATER SYSTEMS—HAY TOOLS—DOOR HANGERS**

## NOTHING LIKE IT EVER PRINTED!

*The New Frick Catalog of Ammonia  
Valves and Fittings*

Showing flanged pieces both separately and complete with companion flanges, bolts and gaskets . . . with weights and principal dimensions listed in the same tables . . . and with only one discount applying to everything . . . Frick Catalog H is the answer to your need for a manual of valves and fittings that is convenient to use. Many new items, including repair parts for valves, are presented.

*Your copy is waiting.*

